CELVIANO AP-7

DIGITAL PIANO
PIANO DIGITAL

OPERATION MANUAL 1
MANUAL DE OPERACION 72

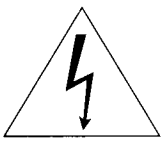
(英)(西)

CASIO®

IMPORTANT

Be careful to slide the keyboard cover all the way open whenever you are playing the piano. If you fail to do so, there is the danger that vibration may cause the cover to close suddenly, possibly injuring your fingers.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Congratulations on your selection of Casio's new AP-7 Digital Piano. This piano is a sophisticated musical instrument that blends the very best of traditional keyboard feel and sound quality with the latest that modern electronics technology has to offer. In addition, you also get compact disc and memory card playback capabilities, plus a two-track sequencer and memory card storage.

Before using the AP-7, be sure to carefully read through the instructions contained in this manual.

About this manual...

This manual is divided into five parts.

PART 1 — Getting Acquainted

This part of the manual helps you get acquainted with the controls, features, and functions of the keyboard. It tells you where controllers are located, where to connect cables, etc.

PART 2 — Basic Operation

This part of the manual provides the basic information that you need for operating the keyboard. It is meant to serve as a quick reference that describes the fundamentals of each operation. Because of this, little or no detail is provided. Page numbers in this section indicate where more detail can be found in Part 3.

PART 3 — Operation Reference

This part of the manual provides all of the technical details that apply to each operation that can be performed on the keyboard. Key operations along with illustrations of the display as it should appear are provided, along with detailed notes and precautions. You should read this part of the manual at least once to familiarize yourself with the full potential of the keyboard's features and functions.

PART 4 — MIDI Reference

This part of the manual tells you all you need to know to connect with another MIDI instrument or device for data exchanges.

PART 5 — Technical Reference

This part of the manual provides technical information on troubleshooting, user maintenance, specifications, error messages, etc.

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PART 1 Getting Acquainted, Getting Started

This part of the manual helps you get acquainted with the controls, features, and functions of the keyboard. It tells you where controllers are located, where to connect cables, etc.

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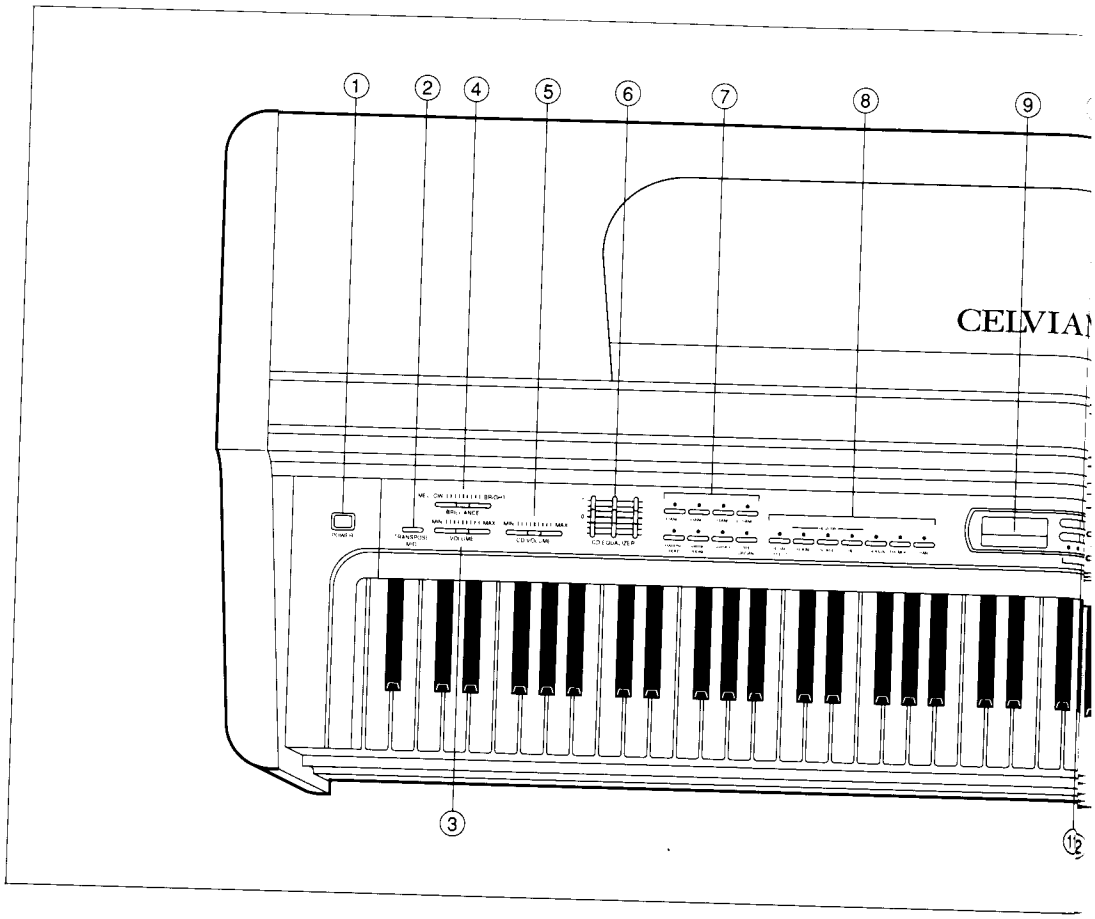
General Guide



① **Power Switch**
Switches the keyboard on and off. An indicator on the front left of the keyboard lights when power is on.

② **Transpose/MIDI**
Selects between setting of key transpose, setting of MIDI basic channel, and setting of MIDI multi mode.

③ **Volume Controller**
Controls overall keyboard volume.

④ **Brilliance Controller**
Balances the brightness and mellowness of the output tone.

⑤ **CD Volume Controller**
Controls the volume of compact disc output.

⑥ **CD Equalizer**
Controls three frequency bands of the sound output by the compact disc player.

⑦ **Tone Selectors**
Use these selectors to choose a preset tone.

⑧ **Effect Selectors**
Use these selectors to choose from among available keyboard effects.

⑨ **Liquid Crystal Display**
Displays operational settings and levels.

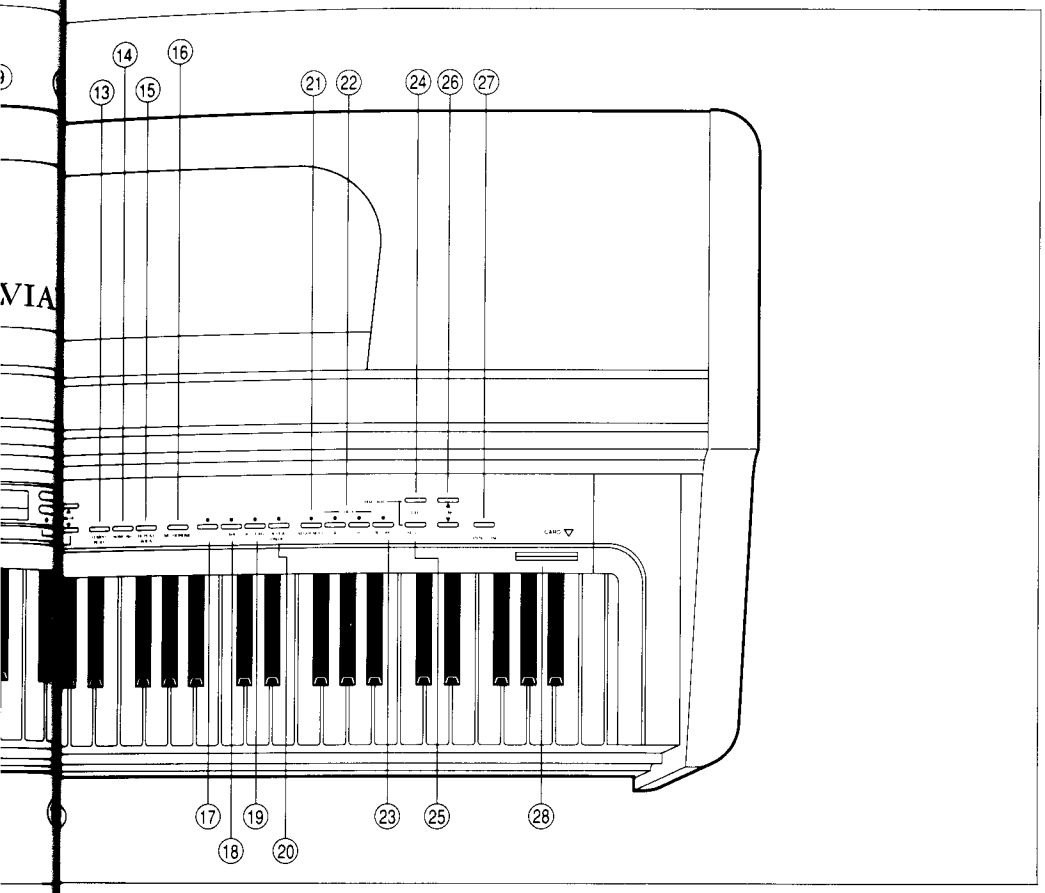
⑩ **Control Buttons**
Use these buttons to control operation of the compact disc player, card mechanism, sequencer and metronome.

⑪ **Beat Indicators**
Flash to indicate the beat currently being played.

⑫ **VALUE Keys**
Use these keys to change displayed values and other input data.

⑬ **Tempo/Beat Button**
Press to show a display for changing of the tempo and beat settings.

⑭ **Song Number Button**
Press to change the current CD or card song number on the liquid crystal display.



⑮ **Repeat Area Button**
Use this button to define the area on a CD or card for repeat playback.

⑯ **Metronome Button**
Switches the Metronome Function on and off.

⑰ **CD Mode Button**
Use this button to enter and exit the CD Mode.

⑱ **Card Mode Button**
Use this button to enter and exit the Card Mode.

⑲ **Off Part Button**
Use this button to select the playback part to be switched off.

⑳ **Repeat On/Off Button**
Switches CD and card repeat on and off.

㉑ **Sequencer Button**
Use this button to enter and exit the Sequencer Mode.

㉒ **Track Buttons**
Use these buttons to select between sequencer tracks A and B.

㉓ **Record Button**
Use this button to put the keyboard into standby for recording in the Sequencer Mode.

㉔ **RAM Card Execute Button**
Use this button to execute a RAM card function.

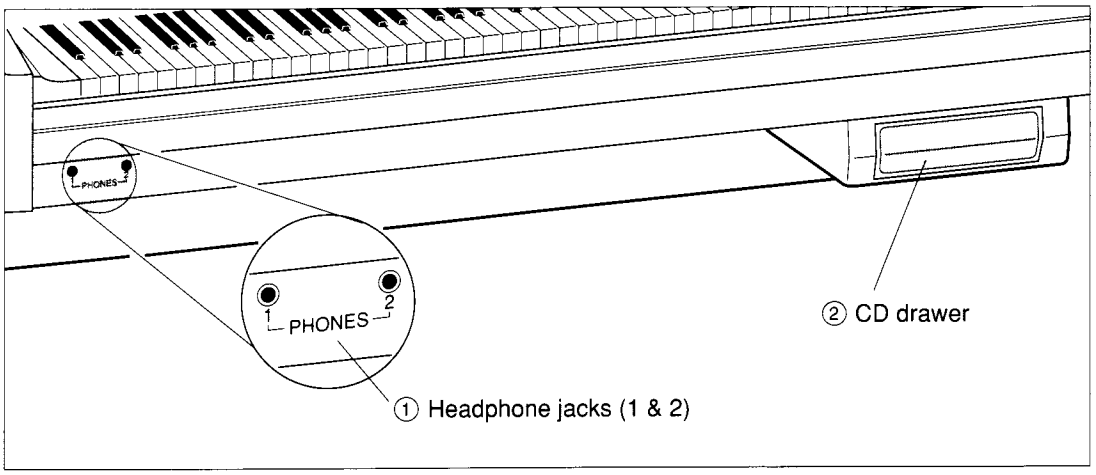
㉕ **RAM Card Select Button**
Press to select a RAM card function.

㉖ **Tuning Buttons**
Use these buttons to tune the keyboard.

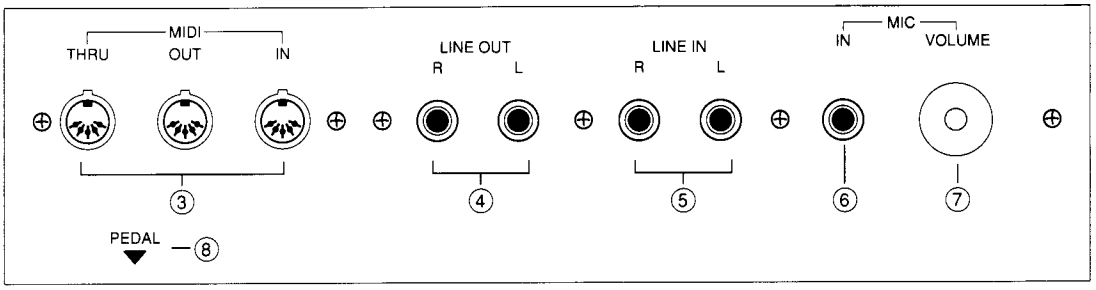
㉗ **CD Open/Close Button**
Press to open and close the CD drawer.

㉘ **Card Slot**
Insert RAM cards and ROM cards here.

Front View



External Connections



① **Headphone Jacks**
For connection of commercially available headphones. Output from the speaker is automatically cut when headphones are connected.

② **CD Drawer**
Holds the compact disc loaded into the keyboard.

③ **MIDI Terminals**
For connection of other MIDI instruments and devices.

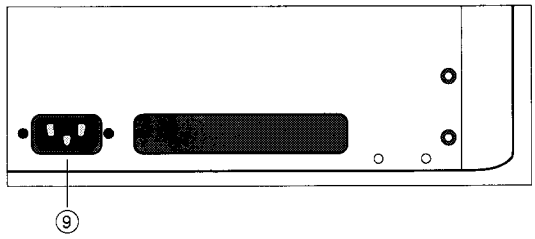
④ **Line Out Jacks**
For connection of keyboard amplifiers, external speakers, audio equipment, etc.

⑤ **Line In Jacks**
For connection of other instruments, audio equipment, etc. Note that the input sound cannot be controlled by the Volume Controller of this keyboard.

⑥ **Microphone Jack**
For connection of commercially available microphone.

⑦ **Microphone Volume Controller**
Controls microphone output volume.

⑧ **Pedal Jacks**
For connection of pedals.



⑨ **AC Power Supply Jack**
For connection of power cord.

PART 2 Basic Operation

This part of the manual provides the basic information that you need for operating the AP-7. It is meant to serve as a quick reference that describes the fundamentals of each operation. Because of this, little or no detail is provided.

The page numbers referenced in this section show where you should go for more details.

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Setting Up the Keyboard

Use the following procedure to set up the keyboard for play.

■ **To switch the keyboard on** — Page 24

Press the POWER button to switch power on.

■ **To select a tone** — Page 24

Press a TONE selector to select the tone you want to use.

■ **To select an effect** — Page 24

Use the EFFECT selectors to select the effects you want to use.

■ **To adjust the brilliance** — Page 24

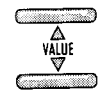
Slide BRILLIANCE controller toward the BRIGHT setting for a brighter tone, or toward the MELLOW setting for a more mellow tone.

■ **To switch the Metronome Function on and off** — Page 24

Press the METRONOME button to switch the Metronome function on and off.

■ **To change the key of the keyboard** — Page 26

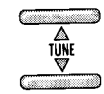
1. Hold down the TRANSPOSE/MIDI button.



2. Use the VALUE ▲ key and VALUE ▼ key to change the key of the keyboard.

3. Release the TRANSPOSE/MIDI button again to exit key setting.

■ **To tune the keyboard** — Page 26



Press the TUNING buttons to adjust the tuning of the keyboard.

Using the Compact Disc Mode

The AP-7 comes equipped with a compact disc (CD) mechanism that lets you play back performances from prerecorded discs. With the CD supplied with the AP-7 and other special lesson CDs, you can use "Minus-One Play" to practice the keyboard with full backup orchestration. You can even use the CD player of the AP-7 to simply enjoy playback of your favorite tunes of standard, commercially available compact discs.

■ **To enter and exit the CD Mode** — Page 27

1. Press the CD MODE button to enter the CD Mode.

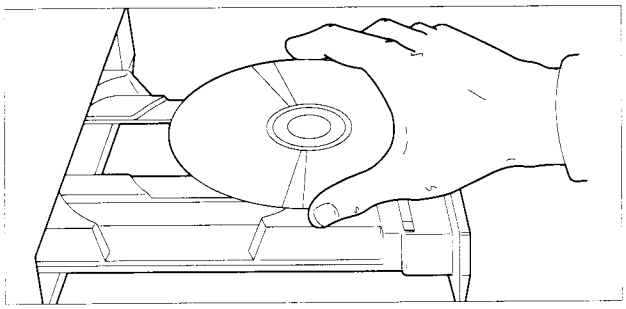
2. Press the CD MODE button again to exit the CD Mode.

■ **To load a CD into the keyboard** — Page 28

1. Press the CD MODE button to enter the CD Mode.

2. Press the CD OPEN/CLOSE button to open the CD drawer.

3. Place a compact disc onto the table in the drawer.



4. Press the CD OPEN/CLOSE button to close the CD drawer.

■ **To select a CD song** — Page 29

1. Press the VALUE ▲ key to increase the current song number.

2. Press the VALUE ▼ key to decrease the current song number.

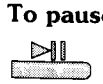
■ **To start and stop CD playback** — Page 29

1. Enter the CD Mode and load a CD into the keyboard.

2. Press the START/PAUSE button to start playback.

3. To stop playback, press the STOP button.

■ **To pause during CD playback** — Page 30



1. While a CD is playing, press the START/PAUSE button to momentarily suspend playback.
2. To resume playback, press the START/PAUSE button again.

■ **To use cue** — Page 30

1. While a CD is playing or paused, hold down the CUE button to advance at high speed.
2. To return to normal play or pause, release the CUE button.

■ **To use review** — Page 30

1. While a CD is playing or paused, hold down the REVIEW button to reverse the playback at high speed.
2. To return to normal play or pause, release the REVIEW button.

■ **To select the type of repeat** — Page 32

1. Any time while the CD is not playing in the CD Mode, press the REPEAT AREA button.
2. Press one of the VALUE keys. Each time you do, the type of repeat changes in the following sequence.

→ <SONG> → <ALL> → <S→E> →

3. After you make your setting, press the REPEAT AREA button again to exit type of repeat setting.

4. Use the REPEAT ON/OFF button to switch the selected type of repeat on and off.

■ **To repeat play an entire CD song** — Page 33

1. Select the song you want to repeat.
2. Select SONG as the type of repeat.

3. Start playback from the disc.

4. Press the REPEAT ON/OFF button to switch repeat on.

5. The current song continues to repeat until you press the STOP button.

■ **To repeat play the entire disc** — Page 33

1. Select ALL as the type of repeat.

2. Start playback from the disc.

3. Press the REPEAT ON/OFF button.

4. The disc continues to repeat until you press the STOP button.

■ **To define repeat start and end points** — Page 33

1. Select the song in which you want to define start and end points.

2. Select S→E as the type of repeat.

3. Start playback from the disc.

4. Press the REPEAT AREA button.

5. Press the VALUE ▲ key at the location in the CD song you want to define as the repeat start point.

6. Press the VALUE ▲ key again at the location in the CD song you want to define as the repeat end point.

7. Press the REPEAT AREA button to exit repeat point definition and return to the playback display.

■ **To start and stop repeat play of a previously defined section** — Page 35

1. Select the song in which the section you want to repeat is already defined.

2. Select S→E as the type of repeat.

3. Press the REPEAT ON/OFF button to switch repeat on.

4. Start playback from the disc.

5. Playback from the start point to the end point starts, and continues until you press the STOP button.

Using the Card Mode

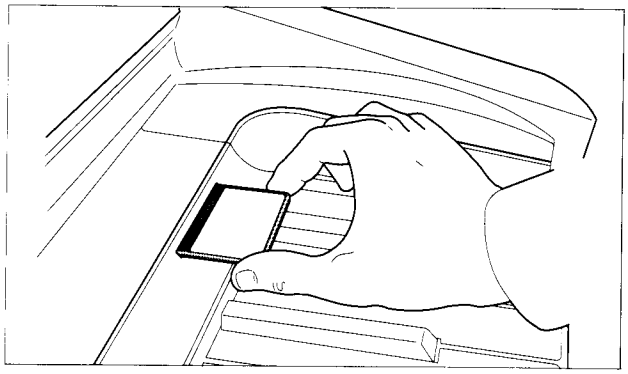
The Card Mode of the AP-7 lets you use ROM (Read Only Memory) cards to play back performances from prerecorded cards and RAM (Random Access Memory) cards to store performances on the keyboard for later playback (see "Using the Sequencer"). You can also playback the left and right channels individually, adjust the speed of playback, and repeat full selections or parts of selections.

■ **To enter and exit the Card Mode** — Page 37

1. Press the CARD MODE button to enter the Card Mode.
2. Press the CARD MODE button again to exit the Card Mode.

■ **To insert a card into the keyboard** — Page 38

1. Press the CARD MODE button to enter the Card Mode.
2. Insert a card into the card slot.



3. To remove the card, simply pull it out of the keyboard.

■ **To select a card song** — Page 38

1. Press the VALUE ▲ key to increase the current song number.

2. Press the VALUE ▼ key to decrease the current song number.

■ **To start and stop card playback** — Page 38

1. Enter the Card Mode and insert a card into the card slot.

2. Press the START/PAUSE button to start playback.

3. To stop playback, press the STOP button.

■ **To use cue** — Page 39

1. While a card is playing or paused, hold down the CUE button to advance measure-by-measure at high speed.
2. To return to normal play or pause, release the CUE button.

■ **To use review** — Page 39

1. While a card is playing or paused, hold down the REVIEW button to reverse measure-by-measure at high speed.
2. To return to normal play or pause, release the REVIEW button.

■ **To change the tempo** — Page 40

1. In the Card Mode, press the TEMPO/BEAT button.

2. Use the VALUE keys to increase or decrease the tempo.

3. Press the TEMPO/BEAT button again to exit tempo setting.

■ **To select the type of repeat** — Page 41

1. Any time while the card is not playing in the Card Mode, press the REPEAT AREA button.
2. Press one of the VALUE keys. Each time you do, the type of repeat changes in the following sequence.

→ <SONG> → <ALL> → <S→E> →

3. After you make your setting, press the REPEAT AREA button again to exit repeat type setting.

4. Use the REPEAT ON/OFF button to switch the selected type of repeat on and off.

■ **To repeat play an entire card song** — Page 42

1. Select the song that you want to repeat.
2. Select SONG as the type of repeat.

3. Start playback from the card.

4. Press the REPEAT ON/OFF button.

5. The current card song continues to repeat until you press the STOP button.

■ **To repeat play the entire card** — Page 42

1. Select ALL as the type of repeat.

2. Start playback from the card.

3. Press the REPEAT ON/OFF button.

4. The card continues to repeat until you press the STOP button.

■ **To define repeat start and end points** — Page 42

1. Select the song that contains the section you want to repeat.

2. Select <S→E> as the type of repeat.

3. Start playback from the card.

4. Press the REPEAT AREA button.

5. Press the VALUE ▲ key at the location in the card song you want to define as the repeat start point.

6. Press the VALUE ▲ key again at the location in the card song you want to define as the repeat end point.

7. Press the REPEAT AREA button to exit repeat point definition and return to the playback display.

■ **To start and stop repeat play of a previously defined section** — Page 44

1. Select the song in which the section you want to repeat is already defined.

2. Select <S→E> as the type of repeat.

3. Press the REPEAT ON/OFF button.

4. Start playback from the card.

5. Playback from the start point to the end point starts, and continues until you press the STOP button.

Using the Sequencer Mode

The AP-7's two-track sequencer gives you sophisticated digital recording capabilities so you can produced highly polished recordings of your performances. You can use the sequencer by itself, or in combination with the CD or Card Mode to mix and match all types of parts into a finished work. A battery retains your recordings in memory even when the power of the keyboard is switched off.

USING THE SEQUENCER MODE ALONE — Page 46

The following procedures describe how to use the Sequencer Mode alone, without the CD or Card Mode.

■ To enter and exit the Sequencer Mode — Page 46

1. Press the SEQUENCER button to enter the Sequencer Mode.

2. Press the SEQUENCER button again to exit the Sequencer Mode.

■ To record to the sequencer — Page 46

1. Press the SEQUENCER button to enter the Sequencer Mode.

2. Press the RECORD button to enter record standby.

3. If the sequencer is empty, use the VALUE keys to set the tempo.

4. Press the TEMPO/BEAT button to move the cursor to the beat setting.

5. Use the VALUE keys to set the beat.

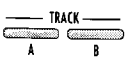
6. If you want to use the metronome to sound during the recording session, press the METRONOME button to switch it on.

7. Press the START/PAUSE button to start recording.

8. To stop recording, press the STOP button.

■ To playback from the sequencer — Page 47

1. Press the SEQUENCER button to enter the Sequencer Mode.



2. Use the TRACK buttons to select the track(s) you want to play back.

3. Use the VALUE keys to set the tempo for the playback.

4. If you want want the metronome to sound during the playback, press the METRONOME button to switch it on.

5. Press the START/PAUSE button to start playback.

6. To stop playback, press the STOP button.

■ **To pause during sequencer playback** — Page 48

1. While the sequencer is playing, press the START/PAUSE button to momentarily suspend playback.
2. To resume playback, press the START/PAUSE button again.

■ **To use cue** — Page 49

1. While the sequencer is playing or paused, hold down the CUE button to advance measure-by-measure at high speed.
2. To return to normal play or pause, release the CUE button.

■ **To use review** — Page 49

1. While the sequencer is playing or paused, hold down the REVIEW button to reverse measure-by-measure at high speed.
2. To return to normal play or pause, release the REVIEW button.

■ **To change the tempo** — Page 49

1. While sequencer playback is in progress, press the TEMPO/BEAT button.

2. Use the VALUE keys to increase or decrease the tempo setting.

3. After you make your setting, press the TEMPO/BEAT button again to exit tempo setting.

■ **To change a sequencer recording from a certain point** — Page 49

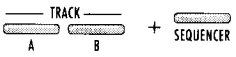
1. Start playback.

2. Press the RECORD button.

3. Use the TRACK A and TRACK B buttons to select the track you wish to re-record.
4. At the point where you want to re-record, start playing.

5. To stop recording, press the STOP button.

■ **To delete sequencer data** — Page 50



1. Holding down the TRACK button for the track you want to delete (TRACK A or TRACK B), press the SEQUENCER button.

2. Press the VALUE ▲ key to delete the data for the track you selected in step 1, or the VALUE ▼ key to abort the procedure without deleting any data.

USING THE SEQUENCER MODE WITH THE CD MODE — Page 51

The following procedures describe how to use the Sequencer Mode in combination with the CD Mode.

■ To enter the Sequencer Mode from the CD Mode — Page 51

1. Load a CD into the keyboard.

2. Enter the CD Mode.

3. Enter the Sequencer Mode.

■ To coordinate sequencer recording with CD playback — Page 51

1. While in the CD Mode, select the CD song you want to playback.

2. Enter the Sequencer Mode.

3. Press the RECORD button to enter record standby and select the track you want to record to.

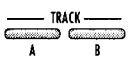
4. Press the START/PAUSE button to simultaneously start CD playback and sequencer recording.

5. To stop recording and disc playback, press the STOP button.

■ To coordinate sequencer playback with CD playback — Page 52

1. While in the CD Mode, select the CD song you used previously when recording the data stored by the sequencer.

2. Enter the Sequencer Mode.



3. Select the track you want to play back.

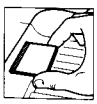
4. Press the START/PAUSE button to simultaneously start CD and sequencer playback.

5. To stop sequencer and disc playback, press the STOP button.

USING THE SEQUENCER MODE WITH THE CARD MODE — Page 53

The following procedures describe how to use the Sequencer Mode in combination with the Card Mode.

■ To enter the Sequencer Mode from the Card Mode — Page 53



1. Insert a Card into the keyboard.

2. Enter the Card Mode.

3. Enter the Sequencer Mode.

■ **To coordinate sequencer recording with card playback** — Page 53

1. While in the Card Mode, select the card song and tempo you want to playback.

2. Enter the Sequencer Mode.

3. Press the RECORD button to enter record standby and select the track you want to record to.

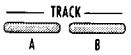
4. Press the START/PAUSE button to simultaneously start card playback and sequencer recording.

5. To stop recording and disc playback, press the STOP button.

■ **To coordinate sequencer playback with card playback** — Page 54

1. While in the Card Mode, select the card song you used previously when recording the data stored by the sequencer.

2. Enter the Sequencer Mode.



3. Select the track you want to play back.

4. Press the START/PAUSE button to simultaneously start card and sequencer playback.

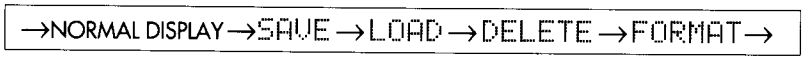
5. To stop sequencer and disc playback, press the STOP button.

Using RAM Cards

The following procedures describe how to store sequencer data to and recall data from a RAM card. There are four RAM card functions: save, load, delete, and format. Note that you must format a RAM card before you can use it for data storage.

■ **To select a RAM card function** — Page 56

1. While no playback (CD or card) is being performed by the keyboard, press the RAM CARD SELECT button. Each time you do, the RAM card function changes in the following sequence.



2. Press the RAM CARD SELECT button again to exit this display.

■ **To format a RAM card** — Page 56

1. Insert a RAM card into the card slot.

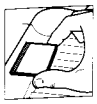
2. Select FORMAT as the RAM card function.

IMPORTANT

The next step deletes all data that may already be stored on the RAM card. Make sure that the RAM card loaded into the keyboard is a new one or, if it already contains data, that you no longer need the data.

3. Press the EXE button to format the RAM card.

■ **To save sequencer data to a RAM card** — Page 57



1. Insert a RAM card into the card slot.

2. Select SAVE as the RAM card function.

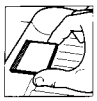
3. Use the VALUE keys to assign a song area number.

IMPORTANT

If the song area number you selected in step 3 above already contains data, the next step erases the existing data.

4. Press the EXE button to save the data.

■ **To load sequencer data from a RAM card** — Page 57



1. Insert the RAM card that contains the data into the card slot.

2. Select LOAD as the RAM card function.

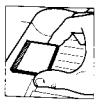
3. Use the VALUE keys to specify the number of the song area that contains the data you want to load.

IMPORTANT

The next step deletes all data that may already be stored on the AP-7 sequencer. Either save the sequencer data to a RAM card or make sure that you no longer need the sequencer data.

4. Press the EXE button to load the data.

■ **To delete sequencer data from a RAM card** — Page 57



1. Insert the RAM card that contains the data into the card slot.

2. Select DELETE as the RAM card function.

3. Use the VALUE keys to specify the number of the song area that contains the data you want to delete.

IMPORTANT

The next step deletes all data stored in the song area number you selected in step 3 above. Make sure that you no longer need the data in the selected song area before continuing.

4. Press the EXE button to delete the data.

PART 3 Operation Reference

This part of the manual provides all of the technical details that apply to each operation that can be performed on the keyboard. Key operations along with illustrations of the display as it should appear are provided, along with detailed notes and precautions. You should read this part of the manual at least once to familiarize yourself with the full potential of the keyboard's features and functions.

INSIDE PART 3

Setting Up the Keyboard 24
Using the Compact Disc Mode 27
Using the Card Mode 37
Using the Sequencer Mode 46
Using RAM Cards 56

Setting Up the Keyboard

Use the following procedure to set up the keyboard.

To switch the keyboard on

Press the POWER button to switch power on.

NOTE

See page 27 for important information on how you can set up the soft pedal to act as a "review pedal" and the sostenuto pedal as a "start/pause pedal."

To select a tone

Press a TONE selector to select the tone you want to use.

- You can select from among Piano 1, Piano 2, Electric Piano 1, Electric Piano 2, Harpsichord, Vibraphone, Guitar, and Pipe Organ. The indicator above the currently selected tone lights to indicate that it is selected.
- If you change the tone selection while a keyboard key is depressed, the tone does not change immediately. The new tone starts to sound when you press another keyboard key.

To select an effect

Use the EFFECT selectors to select the effects you want to use. The indicator above the currently selected effect lights to indicate that it is selected. See "About effects" on the following page.

To adjust the brilliance

Slide BRILLIANCE controller toward the BRIGHT setting for a brighter tone, or toward the MELLOW setting for a more mellow tone.

To switch the Metronome Function on and off

Press the METRONOME button to switch the Metronome function on and off. The indicator above the button lights to indicate that the function is on.

To change the tempo

1. Press the TEMPO/BEAT button until the cursor is under the tempo value.

2. Press the VALUE ▲ key to increase the tempo value (increasing the speed of the metronome), or the VALUE ▼ key to decrease it. You can set the tempo within the range of ♩ = 30 to 300.

About effects...

The following five effects can be activated individually or in any combination. Note, however, that only one of the available REVERB effects can be active at any time.

PEDAL EFFECT This button controls the AP-7's damper pedal
When Pedal Effect is off (when the indicator above this button is not lit), the damper pedal operates as a standard sustain pedal. When the damper pedal is depressed, notes played on the keyboard are sustained, even when the keyboard keys are released.
When Pedal Effect is on (its indicator is lit), a special "reverb plus chorus" effect is applied to notes played while the damper pedal is depressed. This produces an effect similar to that obtained with the damper pedal of a grand piano. The Pedal Effect sounds best with the PIANO 1 tone.

REVERB Pressing one of these three buttons selects the type of reverberation to apply to the sound produced by the AP-7. A Reverb Effect is on when the indicator above its button is lit.

ROOM	Small room
STAGE	Small hall
HALL	Large hall

CHORUS The Chorus Effect makes a single tone sound as if it is being produced by multiple instruments. The Chorus Effect is on when the indicator above this button is lit.

TREMOLO The Tremolo Effect causes speaker output to swell at a fixed interval. This effect sounds best with the E.PIANO and VIBRAPHONE tones. The Tremolo Effect is on when the indicator above this button is lit.

PAN The Pan Effect causes the low notes to be output by the left speaker and the high notes to be output by the right speaker. The Pan Effect is on when the indicator above this button is lit.

To change the number of beats per measure

1. Press the TEMPO/BEAT button until the cursor is under the beat value.

2. Press the VALUE ▲ key to increase the beat value (increasing the number of beats per measure), or the VALUE ▼ key to decrease it. You can set the number of beats as 0 (no accent), 2, 3, 4, 5, or 6.

To reset the tempo and beat to their standard values

Press the VALUE ▲ key and the VALUE ▼ key at the same time to reset the tempo value to ♩ =120 and the beat value to 4.

About the Metronome Function...

When the Metronome Function is switched on, the keyboard emits a metronome-like sound at the tempo speed you set. The first beat of each measure is accented unless you set the beat value as zero. In addition, beat indicators show you exactly what beat of the measure is being counted by the metronome. The following shows how the beat indicators operate for each type of beat setting.

Beat	Beat indicators	Count
0 (no accent)	☼ ○ ○ ○	1
	○ ☼ ○ ○	2
	○ ○ ☼ ○	3
	○ ○ ○ ☼	4
2	● ○ ○ ○	1
	○ ☼ ○ ○	2
3	● ○ ○ ○	1
	○ ☼ ○ ○	2
	○ ○ ☼ ○	3
4	● ○ ○ ○	1
	○ ☼ ○ ○	2
	○ ○ ☼ ○	3
	○ ○ ○ ☼	4

Beat	Beat indicators	Count
5	● ○ ○ ○	1
	○ ☼ ○ ○	2
	○ ○ ☼ ○	3
	○ ○ ○ ☼	4
	○ ○ ☼ ○	5
6	● ○ ○ ○	1
	○ ☼ ○ ○	2
	○ ○ ☼ ○	3
	○ ○ ○ ☼	4
	○ ○ ☼ ○	5
	○ ○ ○ ☼	6

● = accented beat

☼/● = the beat indicator that lights according to the count

To change the key of the keyboard

TRANSPOSE/ MIDI

1. While no playback or metronome operation is being performed by the keyboard, hold down the TRANSPOSE/MIDI button.

```
TRANSPOSE = C_
```

VALUE ▲ ▼

2. Use the VALUE ▲ key and VALUE ▼ key to change the key of the keyboard. Press both VALUE keys at the same time to set the key to C.

```
TRANSPOSE = C#
```

TRANSPOSE/ MIDI

3. Release the TRANSPOSE/MIDI button to exit key setting.

```
<   PIANO 1   >
T=120  BEAT=4
```

- If you change the key while a note is sounding, the key does not change immediately. The new key takes effect with the next note.

To tune the keyboard

TUNE ▲ ▼

Press the TUNING buttons to adjust the tuning of the keyboard. The standard tuning is A_4 = 440 Hz.

```
<   PIANO 1   >
TUNE=440.4
```

TUNE ▲ ▼

Press both TUNING buttons at the same time to tune the keyboard to 440 Hz.

```
<   PIANO 1   >
TUNE=440.0
```

About the keyboard pedals...

The AP-7 is equipped with three pedals: a damper pedal, a soft pedal, and an sos-tenuto pedal. Besides their normal piano-like operations, the soft pedal and sostenuto pedal can also be used to control CD, card, and sequencer playback operations.

Damper pedal

The damper pedal of the AP-7 produces the same effect as the damper pedal of an acoustic piano. By depressing the damper pedal, the sustain effect will cause the notes played to be held even after the keys of the keyboard are released. The AP-7 has five separate damper control levels, depending on how far down you depress the pedal. Also note that the effect of this pedal is applied even on keys that are already depressed when you press the pedal.

Soft pedal

The soft pedal also operates just like the pedal of an acoustic piano, which causes the hammer action to slide slightly to produce a softer sound.

If you hold down the soft pedal when you switch on keyboard power, the pedal becomes a "review pedal". You can press this pedal in any operation in place of the REVIEW button. With this function, you can reverse the playback of a CD, card, or the sequencer without removing your hands from the keyboard, making this function a valuable practice aid.

Sostenuto pedal

A sostenuto pedal is normally found on grand pianos, and it adds a sustain effect to certain notes while allowing other notes to be played in staccato and other styles. The keyboard holds (damper released) only the notes played while the sostenuto pedal is depressed, while other notes sound normally (not held).

If you hold down the sostenuto pedal when you switch on keyboard power, the pedal becomes a "start/pause pedal." You can press this pedal in any operation in place of the START/PAUSE button. With this function, you can start and pause the playback of a CD, card, or the sequencer without removing your hands from the keyboard.

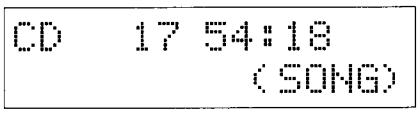
Using the Compact Disc Mode

The Compact Disc (CD) Mode lets you play back performances from prerecorded discs.

To enter and exit the CD Mode

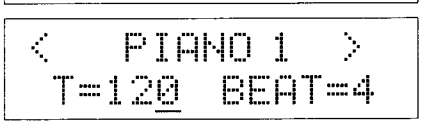
1. Press the CD MODE button to enter the CD Mode.

   If a compact disc is loaded in the keyboard when you enter the CD Mode, the display shows the total number of songs and the total amount of playing time on the CD.



   If no compact disc is loaded the display as shown on the right.

2. Press the CD MODE button again to exit the CD Mode.



About disc types...

There are three basic types of compact discs that can be played back in the CD Mode. The following defines each type of disc, and explains the capabilities and limitations of each type.

Type A Discs Type A Discs include the CD that comes with the AP-7, plus the discs that make up the Celviano Ensemble CD Library. These practice discs include two recordings of each song: one with the piano part backed up by an orchestra; the other with the orchestra part alone (without the piano). The piano-plus-orchestra recording can be used for practice, while the orchestra-only recording can be used for back up of performances.

Type B Discs Type B discs have a single recording of each song, but thanks to the versatile Off Part capabilities of the AP-7, you can cut out certain playback parts of the disc and practice along with the back up.

Commercially Available Discs You can playback virtually any type of commercially available compact disc on the AP-7. With some songs on such discs, you may be able to cut out parts and play along on the keyboard, with other songs you may no be able to isolate the back up. It all depends on how the disc you are playing back was recorded.

About the built-in CD equalizer...

The compact disc player of the AP-7 includes an equalizer that lets you adjust playback in three frequency bands. Slide the equalizer controllers towards the positive (+) side to boost a frequency band, or towards the negative (–) side to cut the band.

To load a CD into the keyboard

CD

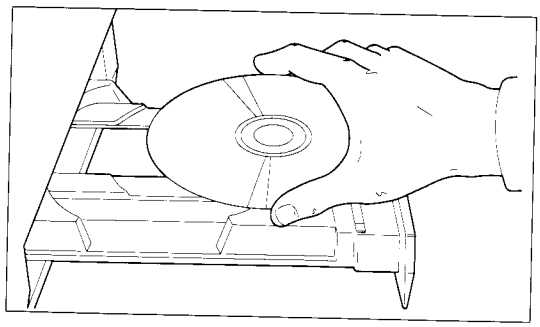
1. Press the CD MODE button to enter the CD Mode.

   If the Metronome Function is switched on, it switches off automatically when you enter the CD Mode.

CD OPEN/CLOSE

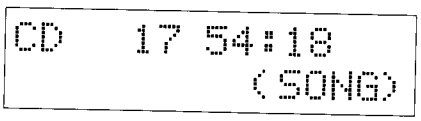
2. Press the CD OPEN/CLOSE button to open the CD drawer.

3. Place a compact disc onto the table in the drawer.



CD OPEN/CLOSE

4. Press the CD OPEN/CLOSE button to close the CD drawer. The display shows the total number of songs on the CD and the total playing time.

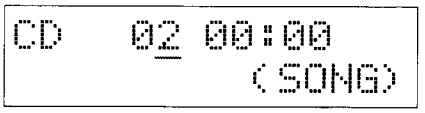


5. To display the information for the current song, press the VALUE ▲ or VALUE ▼ key.

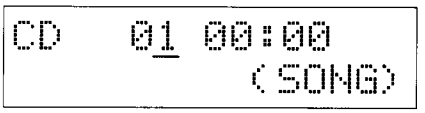
To select a CD song

1. When the current song number and the elapsed song time are on the display the cursor is under the current song number.

2. Press the VALUE ▲ key to increase the current song number.

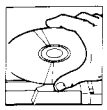


3. Press the VALUE ▼ key to decrease the current song number.



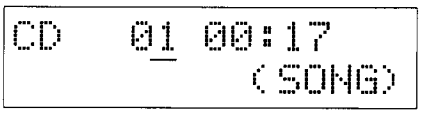
To start and stop CD playback

1. Enter the CD Mode and load a CD into the keyboard.



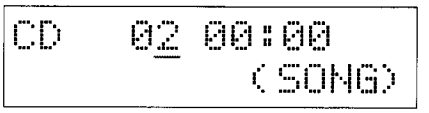
2. Press the START/PAUSE button to start playback.

The elapsed song time counts down from –1, and playback then starts from the CD song whose number is currently shown on the display (the current song number).

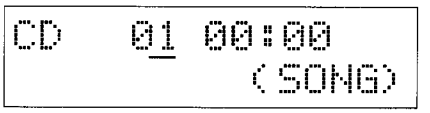


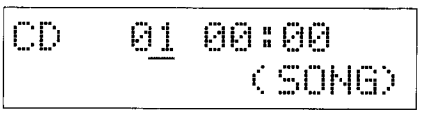
As play progresses, the elapsed song time is shown on the display.

Pressing the VALUE ▲ key during playback jumps to the beginning of the next song.



Pressing the VALUE ▼ key jumps to the beginning of the previous song.



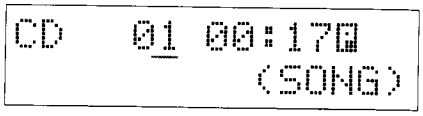


3. To stop playback, press the STOP button. The current song number remains on the display, but the elapsed song time resets to 00:00.

If you allow the CD to continue to play, it stops playback automatically once the end of the song is reached, unless you have the CD Mode set for repeat

To pause during CD playback

1. While a CD is playing, press the START/ PAUSE button to momentarily suspend playback.
   The following operations are valid while playback is paused.



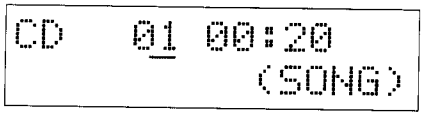
Moves the location of the pause forward.

Moves the location of the pause back.

Jumps to the beginning of the next song.

Jumps to the beginning of the previous song.

2. To resume playback, press the START/PAUSE button again.



To use cue

1. While a CD is playing or paused, hold down the CUE button to advance at high speed. You will be able to hear the high speed forward playback.

   If you reach the end of the current CD song while advancing at high speed, playback stops automatically.

2. To return to normal play or pause, release the CUE button.

To use review

1. While a CD is playing or paused, hold down the REVIEW button to reverse the playback at high speed. You will be able to hear the high speed reverse playback.

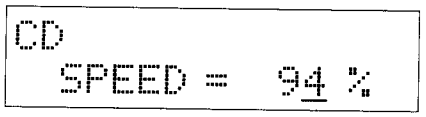
   If you reach the beginning of the current CD song while reviewing at high speed, review operation stops.

2. To return to normal play or pause, release the REVIEW button.

To change CD playback speed

1. Any time while the CD is not playing in the CD Mode, press the TEMPO/ BEAT button.

2. Use the VALUE keys to select one of the six available playback speeds.

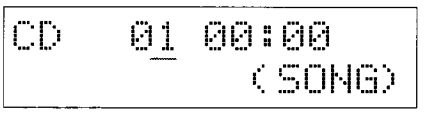


Available Settings for Playback Speed

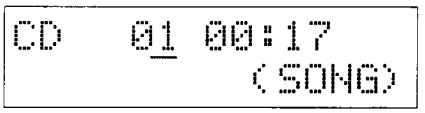
100%	Normal speed
94%	94% of normal speed (1-half note reduction in pitch)
89%	89% of normal speed (2-half note reduction in pitch)
84%	84% of normal speed (3-half note reduction in pitch)
79%	79% of normal speed (4-half note reduction in pitch)
50%	50% of normal speed (1-octave reduction in pitch)

NOTE: The values given above are all approximate.

3. After you make your setting, press the TEMPO/BEAT button again to exit playback speed setting.



4. Press the START/PAUSE button to start playback at the speed you selected.



NOTES

- A change in playback speed also drops the key of the music played. The AP-7 automatically adjusts the key of the the notes produced on the keyboard to match the speed of the CD playback that is set using the above procedure, so you can still play along.
- If you change the CD playback speed, the key of the keyboard is retained even when you exit the CD Mode. To set the keyboard back to its normal key, be sure to repeat the above procedure and set the CD playback speed to 100%.

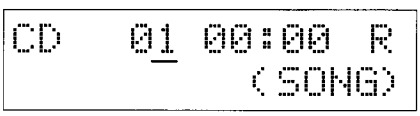
About the CD Mode's Off Part Function...

You can use the CD Mode's Off Part Function to perform the following operations.

- To switch off the piano part of a Celviano Ensemble CD Library disc (Type B) to play along with the orchestra back up.
- To switch off the center components of a commercially available CD and play along on the keyboard. Many (but not all) CDs have their lead vocals or instruments recorded in the center.

To switch a playback part off

In the CD Mode, press the OFF PART button. Each time you do, the switched off part changes in the following sequence.



→ NO DISPLAY → R → L → C →

NO DISPLAY — No parts switched off.

R — Switches off playback of the right channel and causes the left channel part to be output from both speakers.

L — Switches off playback of the left channel and causes the right channel part to be output from both speakers.

C — The left and right channels signals are processed to eliminate the center components.

The part that is currently switched off is indicated on the display.

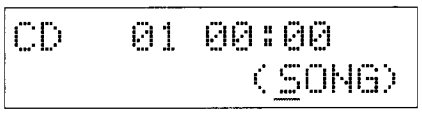
About the CD Mode's Repeat Playback Function...

The CD Mode's Repeat Playback Function lets you set up the keyboard to repeatedly play back all of the songs on a CD, one particular song, or one section within a song. You can define a passage of a song that you are having trouble mastering and keep playing along with it until it becomes yours.

To select the type of repeat

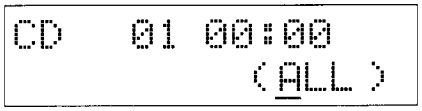
REPEAT AREA

1. Any time while the CD is not playing in the CD Mode, press the REPEAT AREA button.



VALUE

2. Press one of the VALUE keys. Each time you do, the type of repeat changes in the following sequence.



→ SONG → ALL → S→E →

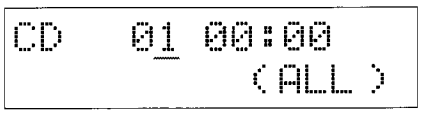
SONG — Repeats a single CD song.

ALL — Repeats an entire CD.

S→E — Repeats a specific section within a CD song.

REPEAT AREA

3. After you make your setting, press the REPEAT AREA button again to exit repeat type setting.



REPEAT ON/OFF

4. Use the REPEAT ON/OFF button to switch the selected type of repeat on and off.

To repeat play an entire CD song

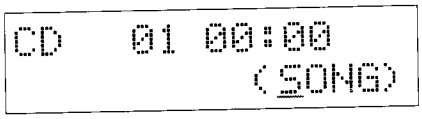
1. Select the song you want to repeat.

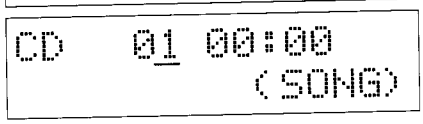
2. Select SONG as the type of repeat.

3. Press the REPEAT ON/OFF button.

4. Start playback from the disc.

5. The current CD song continues to repeat until you press the STOP button.





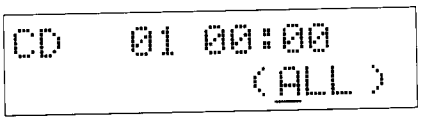
To repeat play the entire disc

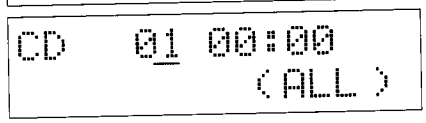
1. Select ALL as the type of repeat.

2. Press the REPEAT ON/OFF button.

3. Start playback from the disc.

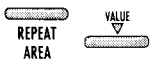
4. The disc continues to repeat until you press the STOP button.





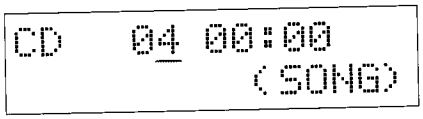
To define repeat start and end points

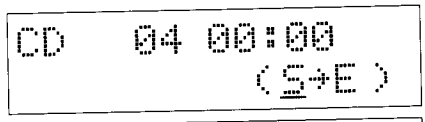
1. Select a song that does not yet contain start and end points. If the song already contains start and end points, you must delete them before you set new ones.

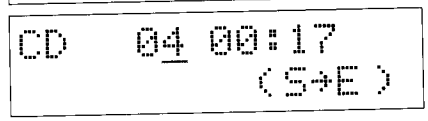


2. Select S→E as the type of repeat.

3. Start playback from the disc.

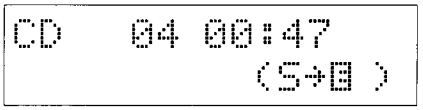




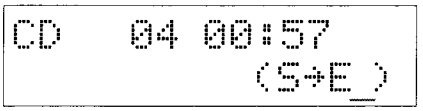


4. Press the REPEAT AREA button.

5. Press the VALUE ▲ key at the location in the CD song you want to define as the repeat start point.

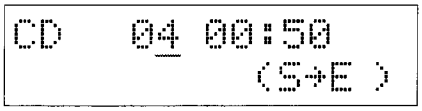


6. Press the VALUE ▲ key again at the location in the CD song you want to define as the repeat end point. If the REPEAT ON/OFF button is ON, playback starts to repeat between the two points you defined.



If the end of the song is reached before you define an end point, playback will stop automatically.

7. Press the REPEAT AREA button to exit repeat point definition and return to the playback display.

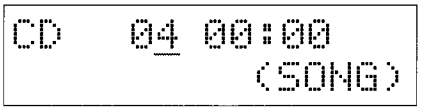


NOTES

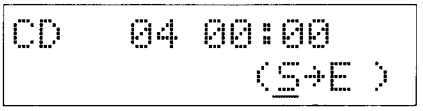
- You can define a start point and end point for each song on the disc, but each song can contain only one start point and one end point.
- Each start point and its end point must be within the same song, and the end point cannot be located before the start point.
- The type of repeat changes automatically from S→E to SONG whenever you select a different song for playback.

To delete previously defined start and end points

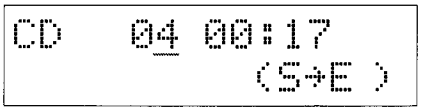
1. Select the song that contains the points you want to delete.



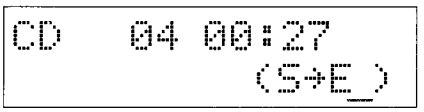
2. Select S→E as the type of repeat.



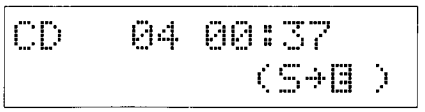
3. Start playback from the disc.



4. Press the REPEAT AREA button.



5. Press the VALUE ▼ key to delete the end point.



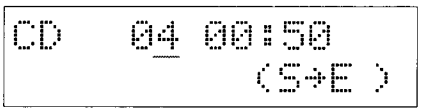
VALUE ▽

6. Press the VALUE ▼ key again to delete the repeat start point.

   You can now define new start and end points.

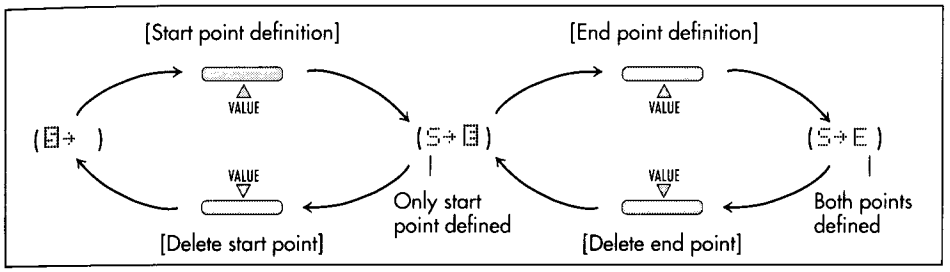
REPEAT AREA

7. Press the REPEAT AREA button to return to the playback display.



NOTES

- If SONG or ALL is selected as the repeat type, nothing happens when you press the REPEAT AREA button during CD playback.
- The following shows how you can move among the different start and end point displays using the VALUE keys.

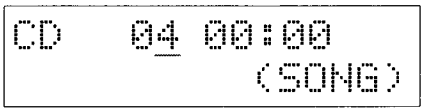


- You can exit the repeat point definition procedure at any time by pressing the REPEAT AREA button, even if you are not finished defining the start and end points.
- If you have only a start point defined for a CD song, playback stops when the end of that song is reached, regardless of whether the REPEAT ON/OFF button is switched on or off. If you press the START/PAUSE button to restart playback, the same CD song starts to play again from the beginning.
- You cannot set an end point in front of a start point. If the CD song that is currently playing has only a start point defined, the VALUE ▲ key does not operate until your pass the start point.

To start and stop repeat play of a previously defined section

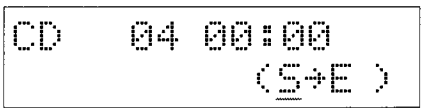
VALUE △ ▽

1. Select the song in which the section you want to repeat is defined.



REPEAT AREA VALUE ▽

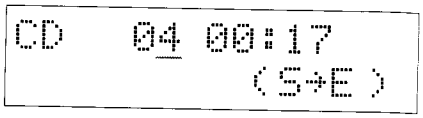
2. Select S→E as the type of repeat.



REPEAT ON/OFF

3. Press the REPEAT ON/OFF button.

4. Start playback from the disc.



5. While repeat is on you can use the CUE and REVIEW buttons to playback at high speed. If you reach the repeat end point the while cuing, playback automatically jumps back to the start point and the cue operation continues. If you reach the repeat start point while reviewing, the review operation stops.

6. Playback from the start point to the end point starts, and continues until you press the STOP button.

Initial CD Mode Settings

The following show the initial settings of the CD Mode whenever the power of the keyboard is switched on.

- CD Song Number: 1
- Playback Speed: 100%
- Off Part: None (all parts on)
- Repeat Mode: (SONG)
- Repeat on/off: Off

Retained CD Mode Settings

The following are the settings of the CD Mode that do not change when you exit the CD Mode, unless you open the CD drawer or switch of the power of the keyboard off.

- CD Song Number
- Playback Speed
- Off Part
- Repeat Area Type

Using the Card Mode

The Card Mode lets you use ROM (Read Only Memory) cards to play back performances from pre-recorded cards and RAM (Random Access Memory) cards to store performances for later playback (see "Using the Sequencer").

About card song types...

There are four basic types of card songs that can be played back in the Card Mode. The following defines each type of song, and explains the capabilities and limitations of each type.

Type A songs This type of song is for practice. All of the songs on the card that comes with the AP-7 are Type A songs. The left hand part is on a separate track from the right hand part, so you can switch either one off to practice the other. With Type A Songs, you can change the playback tones by using the Tone Selectors on the keyboard.

Type B songs This of song is designed for listening enjoyment, with no separation of parts between tracks. Because of this, you cannot switch parts off and the OFF PART button does not operate for playback of this type of song. With Type B songs, you can change the playback tones by using the Tone Selectors on the keyboard.

Type C songs This type of song uses different keyboard tones in each of the tracks, giving the impression of two different musical instruments playing a duet. You can switch either of the parts off and play along in a duet with the remaining part. Though you cannot change the playback tone with Type C songs, you can control the tone of the keyboard when you play along.

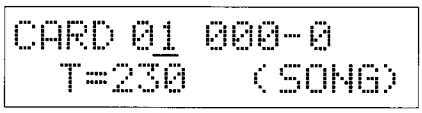
RAM Card songs This type of song is recorded to a RAM card using the Sequencer Mode of the AP-7 (see "Using the Sequencer Mode" on page 46). The 2 playback tracks correspond to the sequencer tracks used when the recording was made. Since the sequencer also records tone data onto the RAM card, you cannot change the playback tone with RAM Card Songs.

To enter and exit the Card Mode

CARD

1. Press the CARD MODE button to enter the Card Mode.

If a card is loaded in the keyboard when you enter the Card Mode, the display shows the current song, measure, and beat numbers. It also shows the current tempo value and repeat type.



If no card is loaded the display as shown on the right.

CARD

2. Press the CARD MODE button again to exit the Card Mode. When you do, the tempo and beat settings made in the Card Mode remain in effect.

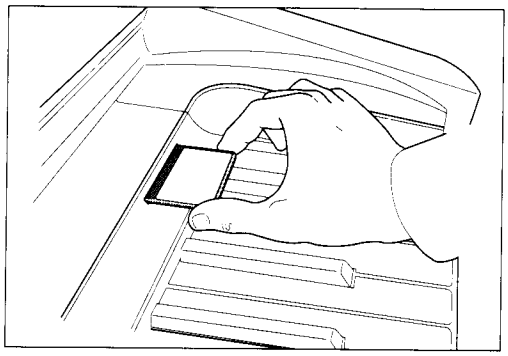
To insert a card into the keyboard

1. Press the CARD MODE button to enter the Card Mode.

```
CARD --  ------
```

2. Insert a card into the card slot.

```
CARD 01 000-0
  T=230   (SONG)
```



To select a card song

1. If the cursor is not already under the song number, press the SONG No. key.

```
CARD 01 000-0
  T=230   (SONG)
```

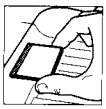
2. Press the VALUE ▲ key to increase the current song number.

```
CARD 02 000-0
  T=54    (SONG)
```

3. Press the VALUE ▼ key to decrease the current song number.

```
CARD 01 000-0
  T=230   (SONG)
```

To start and stop card playback



1. Enter the Card Mode and load a card into the keyboard.

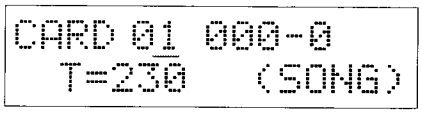
```
CARD 01 000-0
  T=230   (SONG)
```

2. Press the START/PAUSE button to start playback.

The measure/beat display counts down from –1 measure (with the count also shown by the beat indicator), and playback then starts from the card song whose number is currently shown on the display (the current song number).

As play progresses, the measure and beat count is shown on the display.

3. To stop playback, press the STOP button. The current song number remains on the display, but the measure/beat display resets to 000-0.

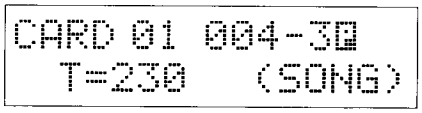


If you allow the card to continue to play, playback stops automatically once the end of the current song is reached, unless you have the Card Mode set for repeat play.

NOTE
The START/PAUSE button does not operate if you press it while a song number that does not have any data recorded is shown on the display.

To pause during card playback

1. While a card is playing, press the START/PAUSE button to momentarily suspend playback.

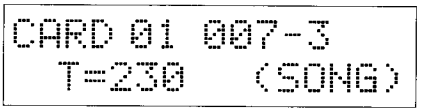


The following operations are valid while playback is paused.

Moves the location of the pause forward in measure increments.

Moves the location of the pause back in measure increments.

2. To resume playback, press the START/PAUSE button again.



To use cue

1. While a card is playing or paused, hold down the CUE button to advance measure-by-measure at high speed. You will not be able to hear the high speed forward playback.

   If you reach the end of the current card song while advancing at high speed, review operation stops.

2. To return to normal play or pause, release the CUE button.

To use review

1. While a card is playing or paused, hold down the REVIEW button to reverse measure-by-measure at high speed. You will not be able to hear the high speed reverse playback.

   If you reach the beginning of the current card song while advancing at high speed, review operation stops.

2. To return to normal play or pause, release the REVIEW button.

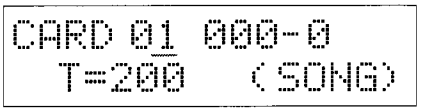
To change the tempo

1. In the Card Mode (either while playback is stopped or in progress), press the TEMPO/BEAT button.

2. Use the VALUE keys to increase or decrease the tempo setting. You can set the tempo within the range of ♩ = 30 to 300.

3. After you make your setting, press the TEMPO/BEAT button again to exit tempo setting.

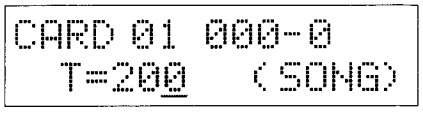
4. Press the START/PAUSE button to start playback at the tempo you selected.

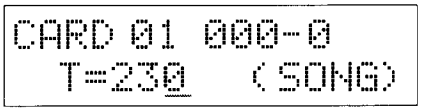


To reset the tempo to its original value

1. If the cursor is not already under the tempo value, press the TEMPO/BEAT key.

2. Press the VALUE ▲ key and the VALUE ▼ key at the same time to reset the tempo value to its original





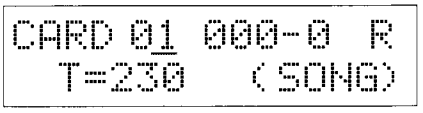
About the Card Mode's off part function...

You can use the Card Mode's Off Part Function to perform the following operations.

- To switch off the left hand or right hand part of a Type A song to practice the part of the other hand.
- To switch off either channel of a Type C song and play along with the other channel.
- To switch off either channel of a RAM Card song and play along with the other channel.

To switch a playback part off

While the song number of a Type A, Type C or RAM Card Song is shown on the display, press the OFF PART button. Each time you do, the switched off part changes in the following sequence.



→ NO DISPLAY→ R → L → LR →

NO DISPLAY	No parts switched off.
R	Switches off playback of the right channel and causes the left channel part to be output from both speakers.
L	Switches off playback of the left channel and causes the right channel part to be output from both speakers.
L R	Switches off playback of both the right and left channels.

The part that is currently switched off is indicated on the display.

NOTES

- The OFF PART button does not operate while the song number of a Type B song is shown on the display.
- Both the left and right parts are switched on automatically when playback changes to another song.

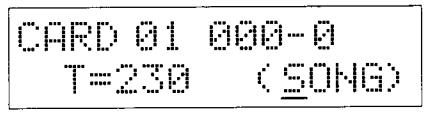
About the Card Mode's Repeat Playback Function...

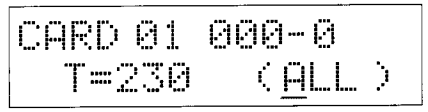
The Card Mode's Repeat Playback Function lets you set up the keyboard to repeatedly play back all of the songs on a card, one particular song, or one section within a song. You can define a difficult passage of a song for repeat and then keep playing it until you have it mastered.

To select the type of repeat

1. Any time while the card is not playing in the Card Mode, press the REPEAT AREA button.

2. Press one of the VALUE keys. Each time you do, the type of repeat changes in the following sequence.

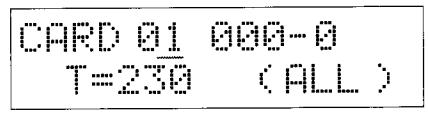




→ SONG → ALL → S→E →

SONG	Repeats a single card song.
ALL	Repeats an entire card.
S→E	Repeats a specific section within a card song.

3. After you make your setting, press the REPEAT AREA button again to exit repeat setting.



4. Use the REPEAT ON/OFF button to switch the selected type of repeat on and off.

To repeat play an entire card song

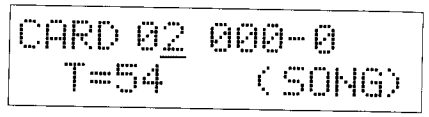
1. Select the song you want to repeat.

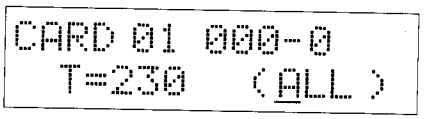
2. Select SONG as the type of repeat.

3. Start playback from the card.

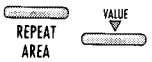
4. Press the REPEAT ON/OFF button.

5. The current card song continues to repeat until you press the STOP button.





To repeat play the entire card

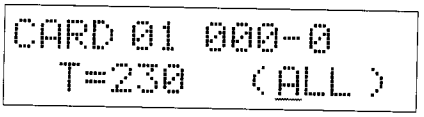


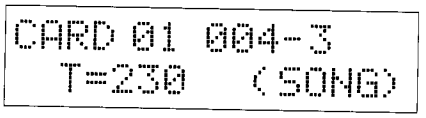
1. Select ALL as the type of repeat.

2. Press the REPEAT ON/OFF button.

3. Start playback from the card.

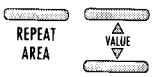
4. The card continues to repeat until you press the STOP button.





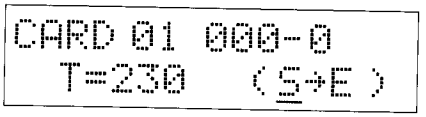
To define repeat start and end points

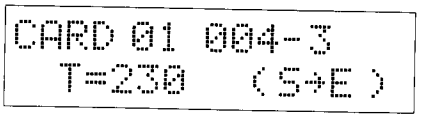
1. Select a song that does not yet contain start and end points. If the song already contains start and end points, you must delete them before you set new ones.



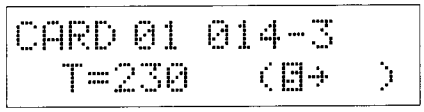
2. Select S→E as the type of repeat.

3. Start playback from the card.

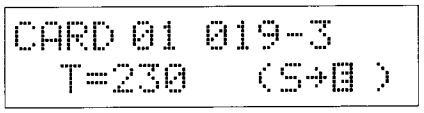




4. Press the REPEAT AREA button to tell the keyboard you want to set the repeat area.



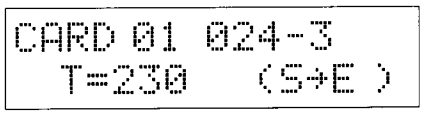
5. Press the VALUE ▲ key at the location in the card song you want to define as the repeat start point.



6. Press the VALUE ▲ key again at the location in the card song you want to define as the repeat end point. If the REPEAT ON/OFF button is ON, playback starts to repeat between the two points you defined.

If the end of the song is reached before you define an end point, playback will stop automatically.

7. Press the REPEAT AREA button to exit repeat point definition and return to the playback display.

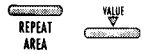


NOTES

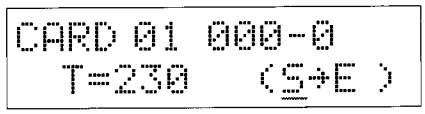
- You can define a start point and end point for each song on the card, but each song can contain only one start point and one end point.
- Each start point and its end point must be within the same song, and the end point cannot be located before the start point.
- The type of repeat changes automatically from S→E to SONG whenever you select a different song for playback.

To delete previously defined start and end points

1. Select the song that contains the points you want to delete.

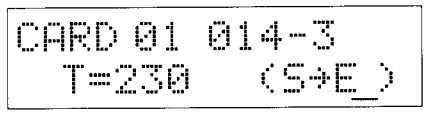


2. Select S→E as the type of repeat.

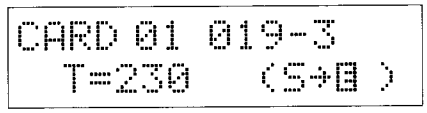


3. Start playback from the card.

4. Press the REPEAT AREA button.



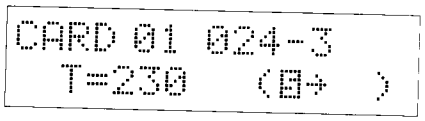
5. While the card song that contains start and end points is playing, press the VALUE ▼ key to delete the end point.



VALUE ▽

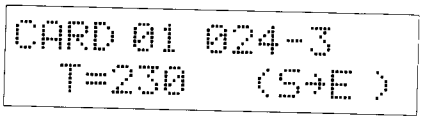
6. Press the VALUE ▼ key again to delete the repeat start point.

   You can now define new start and end points.



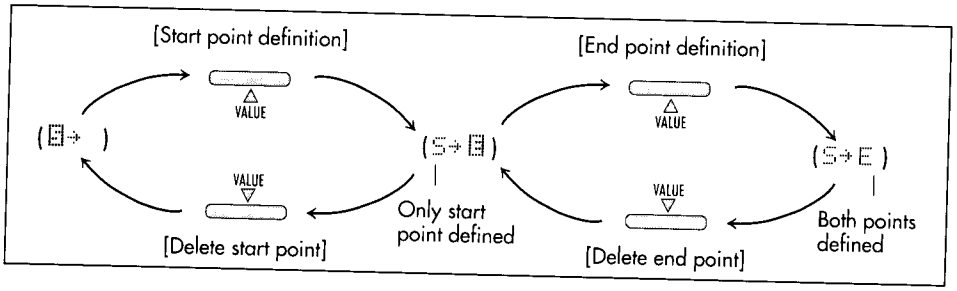
REPEAT AREA

7. Press the REPEAT AREA button to return to the playback display.



NOTES

- If SONG or ALL is selected as the repeat type, nothing happens when you press the REPEAT AREA button during card playback.
- The following shows how you can move among the different start and end point displays using the VALUE keys.

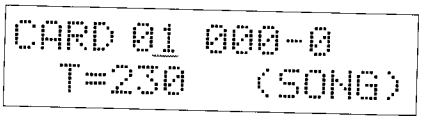


- You can exit the repeat point definition procedure at any time by pressing the REPEAT AREA button, even if you are not finished defining the start and end points.
- If you have only a start point defined for a card song, playback stops when the end of that song is reached, regardless of whether the REPEAT ON/OFF button is switched on or off. If you press the START/PAUSE button to restart playback, the same card song starts to play again from the beginning.
- You cannot set an end point in front of a start point. If the card song that is currently playing has only a start point defined, the VALUE ▲ key does not operate until your pass the start point.

To start and stop repeat play of a previously defined section

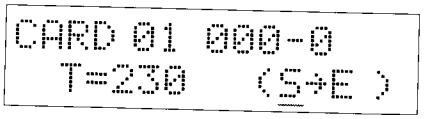
VALUE △▽

1. Select the song in which the section you want to repeat is already defined.



REPEAT AREA VALUE ▽

2. Select S→E as the type of repeat.

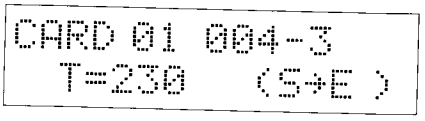


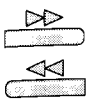
REPEAT ON/OFF

3. Press the REPEAT ON/OFF button.

▷II

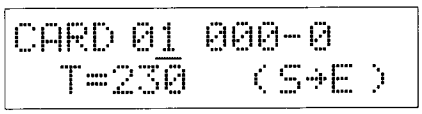
4. Start playback from the card.





5. While repeat is on you can use the CUE and REVIEW buttons to playback at high speed. If you reach the repeat end point while cuing, playback automatically stops. If you reach the repeat start point while reviewing, the review operation stops.

6. Playback of the section continues to repeat until you press the STOP button.



To coordinate card playback with the Metronome Function

1. While a ROM card or RAM card is inserted in the keyboard, press the METRONOME button to switch the Metronome Function on.

2. Start playback from the card. The metronome sounds in time with the playback.

NOTE

- The Metronome Function cannot be used with certain ROM card songs, because such songs are recorded using a free, unrestricted beat. One such song is "Grand Valse Brillante" on the ROM card that comes with the keyboard. The Metronome Function switches off automatically when such a song is selected.

Initial Card Mode Settings

The following show the initial settings of the Card Mode whenever the power of the keyboard is switched on.

- Card Song Number: 1
- Tempo: Song Number 1 tempo
- Off Part: None (L/R on)
- Repeat Mode: (SONG)
- Repeat on/off: Off
- Metronome: Off

Retained Card Mode Settings

The following are the settings of the Card Mode that do not change when you exit the Card Mode, unless you remove the card or switch of the power of the keyboard off.

- Card Song Number
- Repeat Area Type

Using the Sequencer Mode

The AP-7's two-track sequencer gives you digital recording capabilities that can be used by itself, or in combination with the CD or Card Mode. A battery retains recordings even when the power of the keyboard is switched off. The following shows the capacity of the sequencer.

- Memory Capacity: 256 kbits (about 5,600 notes)
- Number of Tracks: 2 (variable length)
- Song Length: Up to 999 measures
- Resolution: 48/♩
- Tempo Setting Range: ♩ = 30 to 300
- Recorded Data: Keyboard data (recorded independently on each track)
  Pedal operation data (recorded independently on each track)
  Tone select data (recorded independently on each track)
  Tempo/Beat setting (same for both tracks)

■ USING THE SEQUENCER MODE ALONE

The following procedures describe how to use the Sequencer Mode,without the CD or Card Mode.

To enter and exit the Sequencer Mode

1. Press the SEQUENCER button to put the keyboard into the Sequencer Mode.

2. Press the SEQUENCER button again to exit the Sequencer Mode.

To record to the sequencer

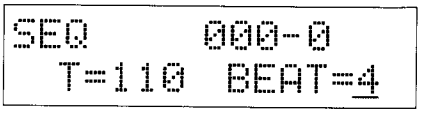
1. Press the SEQUENCER button to enter the Sequencer Mode.

2. Press the RECORD button and the indicator above the button flashes to indicate that the keyboard is in record standby. The indicator above the button for the track that's ready for recording (see note below) also flashes.

   You can abort the recording sequence at any time by pressing the RECORD button again.

3. If the sequencer is empty (see notes below) you can set the tempo and beat values. First, use the VALUE keys to set the tempo for the recording.

4. Next, press the TEMPO/BEAT button to move the cursor to the beat setting.



5. Use the VALUE keys to set the beat for the recording.

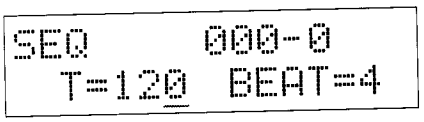
6. If you want to use the metronome to sound during the recording session, press the METRONOME button to switch it on.

7. Press the START/PAUSE button to start recording. At this point, the indicator above the RECORD button lights (stops flashing). Recording starts after a 2-measure intro count which is shown on the display and by the beat indicator. If you switched on the metronome in step 6, the metronome also starts to sound. Note that the start of the record operation deletes any data that was previously recorded in that track.

IMPORTANT

- The pause, cue, and review operations are not available during the record operation.
- When there is memory remaining for about 100 more notes, "1" appears on the display to indicate that sequencer memory is almost full.

8. To stop recording, press the STOP button. At this point, the indicator above the button of the track being recorded to lights (stops flashing).

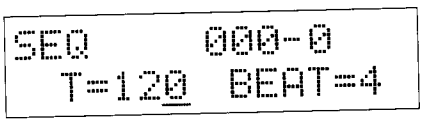


About the tempo and beat settings...

The same tempo and beat data is recorded to both tracks. For example, if you set a tempo value of 142 and a beat value of 3 and record to Track A, the same settings are automatically applied when you record another part to Track B. In this example, the beat value set for Track A cannot be changed when you are recording Track B. You can change the tempo value when recording Track B, but when you play back the song the tempo value you set for Track B will be used.

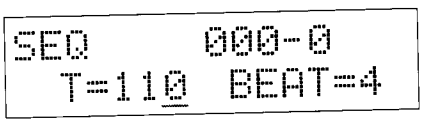
To playback from the sequencer

1. Press the SEQUENCER button to enter the Sequencer Mode.



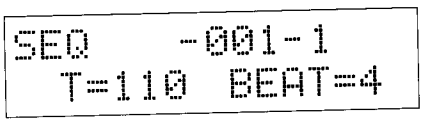
2. Use the TRACK buttons to select the track(s) you want to play back. (See "About track selections..." on the following page.)

3. Use the VALUE keys to set the tempo for the playback.



4. If you want the metronome to sound during the playback, press the METRONOME button to switch it on.

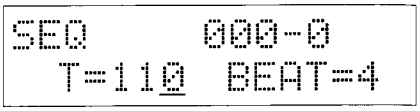
5. Press the START/PAUSE button to start playback.



The measure/beat display counts down from –1 measure (with the count also shown by the beat indicator), and playback then starts. As play progresses, the measure and beat count is shown on the display.

6. To stop playback, press the STOP button.

   If you allow the recording to continue to play, it stops playback automatically once the end is reached.



To pause during sequencer playback

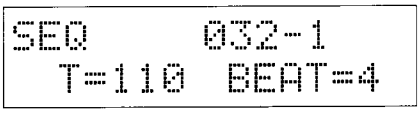
1. While the sequencer is playing, press the START/PAUSE button to momen-tarily suspend playback.

The following operations are valid while playback is paused.

Moves the location of the pause forward in measure increments.

Moves the location of the pause back in measure increments.

2. To resume playback, press the START/PAUSE button again.



About track selections...

The following describes how the keyboard selects the track for recording when you press the RECORD button. Note in the operations described below that you can only change the track being recorded to by pressing the opposite track's button. Pressing a TRACK button whose indicator is flashing does not perform any operation.

- **When both tracks are switched off**
  When the indicators above both track buttons are unlit (meaning the tracks are both switched off), Track A is automatically selected as the track to be recorded to. When you press the RECORD button the indicator above the Track A button begins to flash. At this point, you can change to Track B by pressing the TRACK B button. This causes the indicator above the TRACK A button to go out, and makes the indicator above the TRACK B button flash, indicating that it is ready for recording.
- **When one track is switched on**
  When an indicator above either of the track buttons is lit (meaning one track is switched on and the other track is switched off), the track that is switched on is automatically selected as the track to be recorded to. When you press the RECORD button the indicator above the track that is switched on begins to flash. At this point, you can change to the other track by pressing its TRACK button.
- **When both tracks are switched on**
  When the indicators above both track buttons are lit (meaning the tracks are both switched on), Track A is automatically selected as the track to be recorded to. When you press the RECORD button the indicator above the TRACK A button begins to flash and the indicator above the TRACK B button remains lit. At this point, you can change to Track B by pressing the TRACK B button. This causes the indicator above the TRACK A button to light (stop flashing), and makes the indicator above the TRACK B button flash, indicating that it is ready for recording.

To use cue

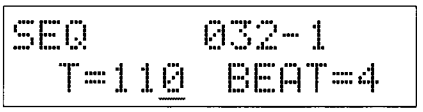
1. While the sequencer is playing or paused, hold down the CUE button to advance measure-by-measure at high speed. You will not be able to hear the high speed forward playback. If you reach the end of the recording while advancing at high speed, playback stops automatically.
2. To return to normal play or pause, release the CUE button.

To use review

1. While the sequencer is playing or paused, hold down the REVIEW button to reverse measure-by-measure at high speed. You will not be able to hear the high speed reverse playback. If you reach the beginning of the recording while reviewing at high speed, playback stops automatically.
2. To return to normal play or pause, release the REVIEW button.

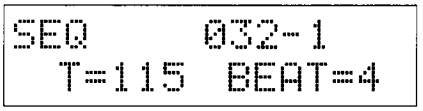
To change the tempo

1. While sequencer playback is in progress, press the TEMPO/BEAT button.



2. Use the VALUE keys to increase or decrease the tempo setting. You can set the tempo within the range of ♩ = 30 to 300.

3. After you make your setting, press the TEMPO/BEAT button again to exit tempo setting.



To reset the tempo to its recorded value

Press the VALUE ▲ key and the VALUE ▼ key at the same time to reset the tempo value to its recorded value.

To change a sequencer recording from a certain point

1. Start playback from the sequencer.

2. When playback is almost up to the point from where you want to re-record, press the RECORD button. The indicators above the RECORD button and the track to be recorded to start to flash, as playback continues. Note that no recording is being performed yet.

   You can abort the recording sequence at any time by pressing the RECORD button again.

3. Use the TRACK A and TRACK B buttons to select the track you wish to re-record (see below). Make sure that the indicator above the TRACK button that corresponds to the track you want to record over is flashing.

4. At the point where you want to re-record, start playing. What you play records over what was in the selected track previously. Keep playing to the end.

5. To stop recording, press the STOP button.

About track selections...

The following describes how the keyboard selects the track for re-recording when you press the RECORD button.

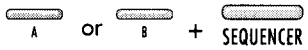
- **When one track is playing back**
  When only one of the tracks is playing back (indicator above either of the track buttons is lit), the track that is playing back is automatically selected as the track to be re-recorded. Once you press the RECORD button, the indicator above the track that is playing back begins to flash. At this point, you cannot change to the other track.

- **When both tracks are playing back**
  When both the tracks are playing back (indicators above both of the track buttons are lit), Track A is automatically selected as the track to be re-recorded to. When you press the RECORD button the indicator above the TRACK A button begins to flash and the indicator above the TRACK B button remains lit. At this point, you can change to Track B by pressing the TRACK B button. This causes the indicator above the TRACK A button to light (stop flashing), and makes the indicator above the TRACK B button flash, indicating that it is ready for re-recording.

IMPORTANT

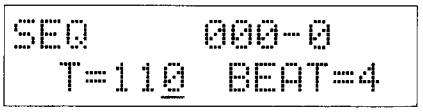
- The pause, cue, and review operations can be used with the playback preceding the actual start of recording.
- Once actual recording starts, the pause, cue, and review operations are not available.

To delete all sequencer data



1. Hold down a TRACK button and press the SEQUENCER ON/OFF button.

2. Press the VALUE ▲ key to delete all sequencer data. To abort the procedure without deleting any data, press the VALUE ▼ key.



■ USING THE SEQUENCER MODE WITH THE CD MODE

The following procedures describe how to use the Sequencer Mode in combination with the CD Mode.

To enter the Sequencer Mode from the CD Mode

1. Load a CD into the keyboard.

2. Enter the CD Mode.

```
CD   17 54:18
          (SONG)
```

3. Enter the Sequencer Mode.

```
SEQ      00:00
```

IMPORTANT

- You cannot enter the Sequencer Mode from the CD Mode if the beat value for data previously stored in the sequencer is other than 4. If you try to enter the sequencer under such conditions, the error message shown at right appears on the display. In this case, you have to delete the sequencer data before you can enter the Sequencer Mode from the CD Mode (see page 50).

```
CD   01 00:00
  BEAT ERROR !
```

To coordinate sequencer recording with CD playback

1. While in the CD Mode, select the CD song you want to playback as described under "Using the Compact Disc Mode" on page 29. Note that you can also set the off part as described under "To switch a playback part off" on page 31.

```
CD   02 00:00
          (SONG)
```

2. Enter the Sequencer Mode.

```
SEQ      00:00
```

3. Press the RECORD button to enter record standby and select the track you want to record to as described under "To record to the sequencer" on page 46.

   You can abort the recording sequence at any time by pressing the RECORD button again.

4. Press the START/PAUSE button to simultaneously start CD playback and sequencer recording. The elapsed song time counts down on the display from –1, and playback then starts from the CD.

```
SEQ      -00:01
```

5. To stop recording and disc playback, press the STOP button. If you allow the CD to continue to play, it stops playback automatically once the end of the song is reached

```
SEQ      00:00
```

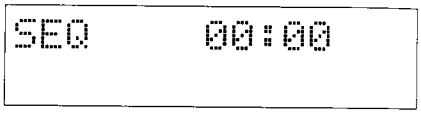
NOTE

- With the recording procedure you can play along with a CD while recording to the sequencer, but only the notes you play on the keyboard are recorded. The output from the CD is not recorded.
- If you change the CD playback tempo in the above procedure, the sequencer tempo setting also changes to match.
- Once you start recording, the pause, cue, and review operations are not available.
- When there is memory remaining for about 100 more notes, M1 appears on the display to indicate that sequencer memory is almost full.

To coordinate sequencer playback with CD playback

1. While in the CD Mode, select the CD song you used when recording to the sequencer, as described under "Using the Compact Disc Mode" on page 29. Note that you can also set the off part as described under "To switch a playback part off" on page 31.

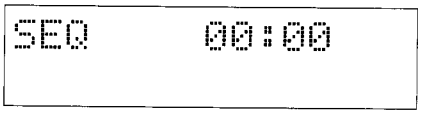
2. Enter the Sequencer Mode.



3. Select the track you want to play back to as described under "To playback from the sequencer" on page 47.

4. Press the START/PAUSE button to simultaneously start CD and sequencer playback. The elapsed song time counts down on the display from −1, and playback then starts.

5. To stop sequencer playback, press the STOP button. If you allow the CD to continue to play, it stops playback automatically once the end of the song is reached.



NOTE

- With the playback procedure, the playback of sequencer data is automatically timed to start with playback of the CD.
- Be sure that you select the same CD song that you used when recording to the sequencer, otherwise the CD/sequencer playback will not match.

To change a CD/sequencer recording from a certain point

1. Start coordinated playback of the CD and sequencer.

2. When playback is almost up to the point from where you want to re-record the sequencer data, press the RECORD button. The indicators above the RECORD button and the track to be recorded to start to flash, as playback continues. Note that no recording is being performed yet.

   You can abort the recording sequence at any time by pressing the RECORD button again.

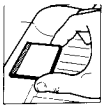
3. Use the TRACK A and TRACK B buttons to select the track you wish to re-record. Make sure that the indicator above the TRACK button that corresponds to the track you want to record over is flashing.
4. At the point where you want to re-record, start playing. What you play records over what was in the selected track previously. Keep playing to the end.

5. To stop recording, press the STOP button.

■ USING THE SEQUENCER MODE WITH THE CARD MODE

The following procedures describe how to use the Sequencer Mode with ROM cards in the Card Mode.

To enter the Sequencer Mode from the Card Mode



1. Insert a card into the keyboard.

2. Enter the Card Mode.

```
CARD 01  000-0
  T=230   (SONG)
```

3. Enter the Sequencer Mode.

```
SEQ      000-0
  T=230
```

IMPORTANT

```
CARD 01  000-0
  BEAT ERROR !
```

You cannot enter the Sequencer Mode from the Card Mode if the beat value for data previously stored in the sequencer does not match the beat value stored with the currently selected card song (whose song number is shown on the display). If you try to enter the sequencer under such conditions, the error message shown to the right appears on the display. In this case, you have to delete the sequencer data or select a card song whose beat value matches that of the sequencer before you can enter the Sequencer Mode from the Card Mode (see page 50).

To coordinate sequencer recording with card playback

1. While in the Card Mode, select the card song and tempo you want to playback as described under "Using the Card Mode" on page 38. With certain types of cards, you can also switch parts off and turn the metronome on.

```
CARD 01  000-0
  T=230   (SONG)
```

2. Enter the Sequencer Mode.

```
SEQ      000-0
  T=230
```

3. Press the RECORD button to enter record standby and select the track you want to record to as described under "To record to the sequencer" on page 46.

   You can abort the recording sequence at any time by pressing the RECORD button again.

4. Press the START/PAUSE button to simultaneously start card playback and sequencer recording. The measure/beat value counts down on the display from –2, and playback then starts from the card.

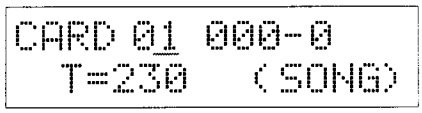
5. To stop recording and card playback, press the STOP button. If you allow the card to continue to play, it stops playback automatically once the end of the song is reached.

NOTE

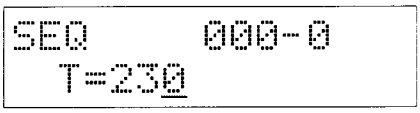
- With the recording procedure you can play along with a card while recording to the sequencer, but only the notes you play on the keyboard are recorded. The output from the card is not recorded.
- If you change the card playback tempo in the above procedure, the sequencer tempo setting also changes to match.
- Once you start recording, the pause, cue, and review operations are not available.
- When there is memory remaining for about 100 more notes, "M" appears on the display to indicate that sequencer memory is almost full.

To coordinate sequencer playback with card playback

1. While in the Card Mode, select the card song you used when recording to the sequencer, as described under "Using the Card Mode" on page 38. Note that you can also set the off part as described under "To switch a playback part off" on page 40.

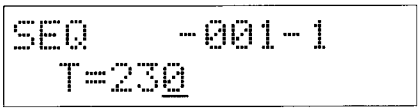


2. Enter the Sequencer Mode.

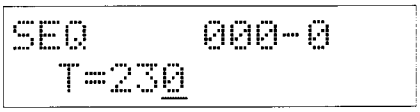


3. Select the track you want to play back to as described under "To playback from the sequencer" on page 47.

4. Press the START/PAUSE button to simultaneously start card and sequencer playback. The measure/beat value counts down on the display, and playback then starts.



5. To stop recording and card playback, press the STOP button. If you allow the card to continue to play, it stops playback automatically once the end of the song is reached.



NOTE

- With the playback procedure, the playback of sequencer data is automatically timed to start with playback of the card.
- Be sure that you select the same card song that you used when recording to the sequencer, otherwise the card/sequencer playback will not match.

To change a card/sequencer recording from a certain point

1. Start coordinated playback of the card and sequencer.

2. When playback is almost up to the point from where you want to re-record the sequencer data, press the RECORD button. The indicators above the RECORD button and the track to be recorded to start to flash, as playback continues. Note that no recording is being performed yet.

   You can abort the recording sequence at any time by pressing the RECORD button again.

3. Use the TRACK A and TRACK B buttons to select the track you wish to re-record. Make sure that the indicator above the TRACK button that corresponds to the track you want to record over is flashing.

4. At the point where you want to re-record, start playing. What you play records over what was in the selected track previously. Keep playing to the end.

5. To stop recording, press the STOP button.

■ Memory Backup Battery

This unit comes with a lithium battery that supplies the power required to retain sequencer data when power is turned off. The life of this battery is about 5 years, and so it must be replaced periodically. Note that sequencer data will be lost whenever you switch power off while the battery is dead.

IMPORTANT

The backup battery must be replaced by an authorized Casio service representative. Contact your local Casio Service Center once every 5 years to arrange to have the battery replaced.

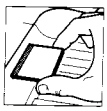
WARNING

- The lithium battery used for memory backup presents fire, explosion, and severe burn hazard. Be sure to contact an authorized Casio Service Center to have the battery replaced.
- Casio Computer Co., Ltd. assumes no responsibility for any damage or loss caused by deletion of sequencer data as a result of malfunction, repairs, or battery replacement. Be sure to back up all important data on optional RAM cards (RA-500) to protect against its loss.

Using RAM Cards

The following procedures describe how to store sequencer data to and recall data from a RAM card. There are four RAM card functions: save, load, delete, and format. Note that you must format a RAM card before you can use it for data storage.

To select a RAM Card Function



1. Insert a RAM card into the card slot.

2. While no playback (CD or card) is being performed by the keyboard, press the RAM CARD SELECT button. Each time you do, the RAM card function changes in the following sequence.

```
RAM CARD
    SAVE=01
```

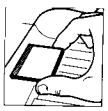
NORMAL DISPLAY → SAVE → LOAD → DELETE → FORMAT →

NORMAL DISPLAY	Display when no playback is being performed.
SAVE	Saves sequencer contents to RAM card.
LOAD	Loads one song from RAM card to sequencer.
DEL	Deletes one song from RAM card.
FORMAT	Formats (initializes) RAM card.

3. Press the RAM CARD SELECT button again to exit this display.

```
<   PIANO 1   >
 T=120  BEAT=4
```

To format a RAM card



1. Insert a RAM card into the card slot.

2. Select FORMAT as the RAM card function.

```
RAM CARD
    FORMAT
```

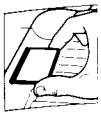
IMPORTANT

The next step deletes all data that may already be stored on the RAM card. Make sure that the RAM card loaded into the keyboard is a new one or, if it already contains data, that you no longer need the data.

3. Press the EXE button to format the RAM

```
<   PIANO 1   >
 T=120  BEAT=4
```

To save sequencer data to a RAM card



1. Insert a RAM card into the card slot.

2. Select SAVE as the RAM card function.

```
RAM CARD
    SAVE=01
```

3. Use the VALUE keys to assign a song area number from 01 through 30 to the data you are saving. Note that if you assign a song area number that is already used on the RAM card, the existing data is *replaced* with the new data.

```
RAM CARD
    SAVE=03
```

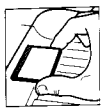
IMPORANT

If the song area number you selected in step 3 above already contains data, the next step erases the existing data.

4. Press the EXE button to save the data.

```
<   PIANO 1   >
 T=120  BEAT=4
```

To load sequencer data from a RAM card



1. Insert a RAM card into the card slot.

2. Select LOAD as the RAM card function.

```
RAM CARD
    LOAD=01
```

3. Use the VALUE keys to specify the number of the song area (01 through 30) that contains the data you want to load.

```
RAM CARD
    LOAD=03
```

IMPORTANT

The next step deletes all data that may already be stored on the AP-7 sequencer. Either save the sequencer data to a RAM card or make sure that you no longer need the sequencer data.

4. Press the EXE button to load the data.

```
<   PIANO 1   >
 T=120  BEAT=4
```

To delete sequencer data from a RAM card

1. Insert a RAM card into the card slot.

2. Select DELETE as the RAM card function.

```
RAM CARD
    DEL =01
```

3. Use the VALUE keys to specify the number of the song area (01 through 30) that contains the data you want to delete.

```
RAM CARD
    DEL =03
```

IMPORTANT

The next step deletes all data stored in the song area number you selected in step 3 above. Make sure that you no longer need the data in the selected song area before continuing.

4. Press the EXE button to delete the data.

```
<   PIANO 1   >
T=120  BEAT=4
```

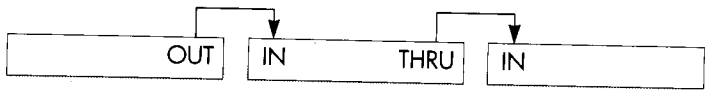
PART 4 MIDI Reference

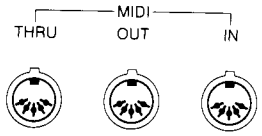
The AP-7 is equipped with MIDI — the Musical Instrument Digital Interface. This interface lets you connect the AP-7 with other MIDI electronic musical instruments and devices for remote control or synchronized ensemble play.

INSIDE PART 4

About AP-7 MIDI functions 60
About damper pedal control data 62

MIDI Message Flow





MIDI terminals

—MIDI OUT
Sends MIDI messages

—MIDI IN
Receives external MIDI messages

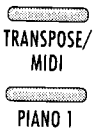
—MIDI THRU
Passes MIDI messages on to another device without alteration.

About AP-7 MIDI Functions...

The AP-7 is capable of the following MIDI functions.

- **MIDI data transmit and receive**
  The AP-7's keyboard can be used to sound the tones on another MIDI keyboard or sound module, or the AP-7 can play sounds generated by another MIDI keyboard or sequencer.
- **ROM card/sequencer data transmit**
  Each track of data recorded to a ROM card or the sequencer can be send over different channels as MIDI data.

To set the MIDI basic channel



1. While no disc or card playback is being performed by the keyboard, hold down the TRANSPOSE/MIDI button and press the PIANO 1 tone selector.

2. Still holding down the TRANSPOSE/MIDI button, press the VALUE buttons to change the MIDI channel on the display.

3. Releasing the TRANSPOSE/MIDI button exits the MIDI basic channel display.

NOTE

- Immediately after you switch the power of the AP-7 on, the receive channel is set to OMNI ON, and the transmit channel is set to 1. With OMNI ON, all channels from 1 through 16 are capable of receiving data.
- The AP-7 lets you specify any channel from 1 through 12 as the MIDI basic channel.

To set the MIDI MULTI CHANNEL mode

TRANSPOSE/ MIDI

PIANO 2

1. While no disc or card playback is being performed by the keyboard, hold down the TRANSPOSE/MIDI button and press the PIANO 2 tone selector.

TRANSPOSE/ MIDI

2. Still holding down the TRANSPOSE/ MIDI button, press the VALUE buttons to switch the MULTI CHANNEL on and off. The following shows the effect on the MIDI OUT channel.

	ON	OFF
Keyboard operation	Basic channel	Basic channel
Sequencer Track A	Basic channel + 1	Basic channel
Sequencer Track B	Basic channel + 2	Basic channel
Card R-part	Basic channel + 3	Basic channel
Card L-part	Basic channel + 4	Basic channel

3. Releasing the TRANSPOSE/MIDI button exits the MULTI CHANNEL display.

NOTES

- When you insert a ROM card or RAM card into the card slot and enter the Card Mode, the MIDI MULTI CHANNEL mode is automatically set up in accordance with the type of song selected, as noted below.

  Type C ROM card or RAM card song.....ON

  Type A or Type B ROM card song.....OFF

- Regardless of the ON/OFF status of the MULTI CHANNEL mode, the receive channel of the AP-7 is set as Basic Channel.
- During sequencer or card playback, pedal effects are applied in accordance with the ON/OFF status of the the MULTI CHANNEL mode, as noted below.

MULTI CHANNEL OFF

Pedal operations on the AP-7 cause the corresponding effect to be applied to both sequencer and card playback. Pedal effect data recorded to a card or the sequencer is applied universally to all notes, whether they are played back from recorded data or played directly on the keyboard of the AP-7.

MULTI CHANNEL ON

Pedal effect data recorded to a card or the sequencer is applied to playback from individual tracks, and does not affect the playback from the other track or play on the keyboard. Likewise, pedal operations on the AP-7 are applied to the keyboard only, and not to playback from a card or the sequencer.

About damper pedal control data...

The AP-7's damper pedal is capable of five different damper effects. The effect applied depends on how far you depress the pedal. Because of this, the control change data that is transmitted also differs in accordance with the pedal position. When control number 64 control change data is received by the AP-7, the AP-7 applies the damper effect in accordance with the received data. The following shows the relationship between the damper effect and control data.

DATA SENT FROM AP-7

Pedal Level	Control Data
1	00
2	20
3	3F
4	60
5	7F

DATA RECEIVED BY AP-7

Control Data	Pedal Effect
00	1
01 to 20	2
21 to 3F	3
40 to 60	4
61 to 7F	5

- For full details on the MIDI data that can be transmitted and received by the AP-7, see the MIDI Implementation Chart that comes with this manual.

PART 5 Technical Reference

This part of the manual provides technical information on troubleshooting, user maintenance, specifications, safety instructions and optional accessories.

INSIDE PART 5

In the Event of an Operating Problem ... 64
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In the Event of an Operating Problem

Most difficulties you encounter while using the AP-7 can be easily corrected by you. If you have a problem while setting up or playing the instrument, please read and carry out the appropriate procedure as indicated in this troubleshooting guide before calling your service representative.

Troubleshooting guide

Symptom	Possible cause	Remedy
Error message on display.		See Error Message Table.
No sound when keyboard keys are pressed.	Volume level too low.	Use Volume Controller to adjust volume level.
	Headphones connected.	Disconnect headphones.
Keyboard notes out of key.	Transpose function not set to key of C.	Set transpose function to key of C (page 26).
	CD playback speed not set to 100%.	Set the CD playback speed to 100% (page 30).
No sound when CD playback is started.	CD volume level too low.	Use CD Volume Controller to adjust volume level.
	Headphones connected.	Disconnect headphones.
CD loaded in keyboard, but playback won't start (no START/PAUSE operation).	Keyboard not in CD Mode.	Enter CD Mode and then press START/PAUSE button (page 32).
No sound when card playback is started.	Volume level too low.	Use Volume Controller to adjust volume level.
	"LR" set as off part.	Change off part setting (page 40).
Card inserted into the card slot, but playback won't start (no START/ PAUSE button operation).	Keyboard not in Card Mode.	Enter Card Mode and then press START/PAUSE button (page 37).
Metronome Function does not operate.	Keyboard in CD Mode.	Exit CD Mode (page 27).
	Song selected in Card Mode cannot use Metronome Function.	Exit Card Mode or change song number to song that can use Metronome function (page 37).
OFF PART button does not operate in Card Mode.	Type B card song selected (page 37).	Change song number to song that is a different type (page 38).
Damper pedal operation has no effect.	Damper pedal depressed when keyboard power switched on.	Switch power off and then back on again.
Soft pedal operation has no effect.	Soft pedal depressed when keyboard power switched on.	Switch power off and then back on again.
Sostenuto pedal operation has no effect.	Sostenuto pedal depressed when keyboard power switched on.	Switch power off and then back on again.
Occasional interference.	Wall outlet used to power keyboard is located too close to outlet being used for a refrigerator, washing machine, or other electrical appliance.	Use a power outlet as far away as possible from appliance thought to be causing interference.

Whenever operation becomes impossible in the CD Mode, Card Mode or Sequence Mode, an error message appears on the display to alert you.

Error Message table

Error message	Meaning
Beat ERROR!	• Attempt made to enter the Sequencer Mode from the CD mode when the beat value of data stored in the sequencer is other than 4. • Attempt made to enter the Sequencer Mode from the Card Mode when the beat value of data stored in the sequencer does not match the beat value of the currently selected card song.
CD ERROR!	Problem with CD playback caused by vibration, damaged disc, etc. Correct the cause of the problem or use another disc.
RAM CARD ERROR 1	No card in the card slot. Press the RAM CARD SELECT button to clear the error display.
RAM CARD ERROR 2	Improper RAM card format. Press the RAM CARD SELECT button to clear the error display.
RAM CARD ERROR 3	Not enough space available on RAM card to perform save. Press the RAM CARD SELECT button to clear the error display.
RAM CARD ERROR 4	No loadable data on RAM card. Press the RAM CARD SELECT button to clear the error display.
RAM CARD ERROR 5	No savable data in sequencer. Press the RAM CARD SELECT button to clear the error display.

Care of Your Keyboard

Observe the following guidelines and your keyboard will provide you with years of troublefree musical enjoyment.

- **Avoid heat, humidity, and direct sunlight**
  Do not overexpose the unit to direct sunlight, or place it near an air conditioner or in any very hot place.
- **Severe impact can cause problems**
  When transporting the unit, use soft cloth to pack around the keyboard and buttons to protect them against damage.
- **Be careful of liquids, dust, etc.**
  Do not let the unit get wet and do not allow foreign matter to get between the keys. Be especially careful of metal objects, such as hairpins, sewing needles, coins, etc.
- **Never try to repair or modify any part of the unit**
  Any attempt to repair or modify the unit can cause problems with operation.
- **Never use lacquer, thinner, or similar chemicals for cleaning**
  Use a soft cloth dampened in a weak solution of water and a neutral detergent to clean the keyboard. Soak the cloth in the solution and wring out all excess water.

- **Avoid using this unit near televisions, radios, etc.**
  Because this unit uses digital circuitry, it may cause interference with other electronic devices such as televisions, radios, etc.
- **In case of a problem...**
  Check that buttons and connections are correct, as indicated in this manual. If the unit still does not work properly, contact your retailer or a nearby dealer. Never try to repair the unit yourself.

Care of Your ROM Card

1. Take care not to bend or drop your ROM card. Never carry it in your back pocket or leave it in other areas where it may be damaged.
2. When not in use, be sure to store your ROM card in its custom case to prevent damage due to dust, etc.
3. Your ROM card contains precision electronic components. Never try to take it apart for any reason.
4. CASIO claims no responsibility whatsoever for damages due to losses of ROM card data.

Specifications

Model	AP-7
Keyboard	88 full-size keys with initial touch response
Polyphony	16 notes
Preset Tones	PIANO 1, PIANO 2, ELEC. PIANO 1, ELEC. PIANO 2, HARPSICHORD, VIBRAPHONE, GUITAR, PIPE ORGAN
Effects	Pedal Effect, Reverb (Room, Stage, Hall), Chorus, Tremolo, Pan, Brilliance
Metronome	0, 2, 3, 4, 5, 6 beats
	♩ = 30 to 300
CD Mode	
Media	Standard accessory Compact Disc ("Best Selection")
	Optional Compact Discs (Celviano Ensemble CD Library)
	Commercially available compact discs
Controllers	START/PAUSE, STOP, CUE, REVIEW, CD VOLUME, 3-band graphic equalizer
Tempo Down Function	5 steps
Playback Repeat Function	1 song, all songs, specific area
Off Part	Left/Center/Right
Foot Pedal Control	Start/Pause/Review
Card Mode	
Media	Standard accessory ROM card ("Best Selection")
	Optional ROM Cards (Celviano Card Solo Library)
	RAM card (optional RA-500)
Controllers	START/PAUSE, STOP, CUE, REVIEW
Playback Repeat Function	1 song, all songs, specific area
Off Part	Left/Right/Both
Foot Pedal Control	Start/Pause/Review
Sequencer	
Recording	Real-time
Number of Tracks	2 (A and B)
Memory Capacity	Approximately 5,600 notes total
Memory Backup Battery	Built-in lithium battery
Battery Life	Approximately 5 years
External Storage	RAM card (optional RA-500)
Pedals	Soft, Sostenuto, Damper
Display	16-column × 2-line liquid crystal display, with backlight
Transpose	F# – C – F
Tuning Control	A_4 = 440Hz ± 50 cents
Terminals	PHONES 1 and 2, MIDI (IN/OUT/THRU), LINE OUT R and L (Output Impedance: 20 KΩ; Output Voltage: 1 V, RMS, max.), LINE IN R and L (Input Impedance: 47 KΩ), MIC IN (Input Impedance: 10 KΩ; Sensitivity: 3 mV)
Speakers	16 cm dia. × 2; 5 cm dia. × 2
Power Supply	(Output: approximately 30 W + 30 W) 100V, 120V, 220V, or 240V AC household current via AC power cord supplied with unit.
Power Consumption	90W with 120V AC
Dimensions	
Without compact disc player and stand	1446 (W) × 549 (D) × 242 (H) mm 56-15/16" × 21-5/8" × 9-1/2"
With compact disc player and stand	1465 (W) × 553 (D) × 845 (H) mm 57-11/16" × 21-3/4" × 33-1/4"
Weight	
Without compact disc player and stand	48 kg (105.5 lbs)
With compact disc player and stand	66 kg (145.5 lbs)
Accessories	ROM card (RC-A) with score; Compact disc (ED-A) with score; AC cord

GUIDELINES LAID DOWN BY FCC RULES FOR USE OF THE UNIT IN THE U.S.A
(not applicable to other areas)

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

... reorient the receiving antenna

... relocate the equipment with respect to the receiver

... move the equipment away from the receiver

... plug the equipment into a different outlet so that the equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the US Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

WARNING:
CHANGING THE VOLTAGE SELECTOR MAY REQUIRE THE USE OF A DIFFERENT LINE CORD OR ATTACHMENT PLUG, OR BOTH. TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

IMPORTANT SAFETY INSTRUCTIONS

"INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS"

WARNING — When using electric products, basic precautions should always be followed, including the following:

1. Read all the instructions before using the product.
2. To reduce the risk of injury, close supervision is necessary when a product is used near children.
3. Do not use this product near water – for example, near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, or the like.
4. This product should be used only with a stand that is recommended by the manufacturer.
5. This product, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
6. The product should be located so that its location or position does not interfere with its proper ventilation.
7. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
8. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
9. This product may be equipped with a polarized line plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet. Do not defeat the safety purpose of the plug.
10. The power-supply cord of the product should be unplugged from the outlet when left unused for a long period of time.
11. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
12. The product should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled into the product; or
    C. The product has been exposed to rain; or
    D. The product does not appear to operate normally or exhibits a marked change in performance; or
    E. The product has been dropped, or the enclosure damaged.
13. Do not attempt to service the product beyond that described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.

SAVE THESE INSTRUCTIONS

GROUNDING INSTRUCTIONS

This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER — Improper connection of the equipment-grounding conductor can result in risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product — if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

CELVIANO ENSEMBLE CD LIBRARY

Beyer & Short Pieces **ED-1001BY** (Disc Type : A)
Beyer No. 8. / Beyer No.41 / Beyer No.60 / Beyer No.63 / Beyer No.76 / Beyer No.88 / Menuet / Adagio / Londonderry Air / Spring from the Four Seasons

Classical Recital **ED-1003CL** (Disc Type : A)
Jesus, Bleibet Meine Freude / Sonata Op. 13 Pathétique 2nd Mov. / Träumerei / Tableaux d'une Exposition "Il Becchio Castello" / Piano Concerto No.20 (K.466) 2nd Mov. / Gymnopédie No.1 / Arabesque No.1 / Piano Concerto No.1 1st Mov.

Enjoy Piano Method 1 **ED-1004EP** (Disc Type : A)
Sonata K.331 1st Mov. / Chanson Triste / Wiegenlied / From Russia with Love / Una Furtiva Lagrima (L'elisir d'amore) / Symphony No.9 "An die Freude" / East of Eden / Je Te Veux / Puff (The Magic Dragon) / Ause's Death / A Time for Us (1)

Enjoy Piano Method 2 **ED-1005EP** (Disc Type : A)
Largo "Ombra Mai Fu", from "Serse" / Violin Concerto 2nd Mov. / I Like Chopin / "Vltava" from Má Vlast" / Because / Polovetzian Dance (Prince Igor) / Love story / Troika / Brother Sun, Sister Moon / Melody in F / Like a Virgin / God Father I (Speak Softly Love)

Enjoy Piano Method 3 **ED-1006EP** (Disc Type : A)
Moon River / Sonata Op.27 No.2 Moonlight 1st Mov. / "Rosamunde" Ouvertüre / The Entertainer (1) / Nocturne / Tara's Theme / Walzer / Love Letters in the Sand / Symphony No.9 2nd Mov. / Piano Concerto No.1 2nd Mov. / Chariots of Fire / Andante Cantabile

Enjoy Piano Method 4 **ED-1007EP** (Disc Type : A)
Canon / An die Musik / Limelight / Prelude "Raindrop" / Baby Elephant Walk / Lied auf dem Abendstern (Tannhäuser) / Antonio's Song / Habanera (Carmen) / Après un Rêve / The Shadow of your Smile / Recuerdos de la Alhambra / God Father II (Love Said Goodbye)

Enjoy Piano Method 5 **ED-1008EP** (Disc Type : A)
The Entertainer (2) / Piano concerto No.21 2nd Mov. / Flute Quartet K.298 1st Mov. / Lara's Theme / Violin Concerto 1st Mov. / Auf Flügein des Gesanges / Garôta de Ipanema / Pavane / A Time for Us (2) / The Summer knows / Tableaux d'une Exposition "Promenade"

Jazz **ED-1009JZ** (Disc Type : B)
C-Jam Blues / Garôta de Ipanema / Satin Doll / Softly as in a Morning Sunrise / The Days of Wine & Roses (1) / Autumn Leaves (2) / On Green Dolphin Street / The Days of Wine & Roses (2) / Round About Midnight / Lover, Come Back to me / Someday My Prince Will Come / Autumn Leaves (3)

Contemporary Pops **ED-1011CP** (Disc Type : A)
Arthur's Theme / Up Where We Belong / Greatest Love of All / If We Hold on Together / Almost Paradise / Take My Breath Away / Never Ending Story / La Isla Bonita

*Refer to page 28 "About disc types" for information on types of the discs.

CELVIANO PIANO SOLO CARD LIBRARY

Beyer 1-43 **RC-1001BY**
Beyer No.1 ~ Beyer No.43 (Type A songs)

Beyer 44-106 **RC-1002BY**
Beyer No.44 ~ Beyer No.106 (Type A songs)

Pieces For Children **RC-1003BH**
Butterflies / Gentle Bee / Oh, You Lovely Augustin / Das Meermädchen / Long, Long Ago / Drunten Im Unterland da ist Halt Fein / A Short Story / Ecossaise / Tick Tack Clock / La Violette / The New doll / Menuet / Winder Reiter / Fröhlicher Landmann / Spinnerlied / Gavotte / Dolly's Dreaming and Awakening / Von Fremden Ländern und Menschen / Walzer No.15
(Type A songs)

Burgmüller 25 Leichte Etüden Op.100 **RC-1004BU**
La Candeur / Arabesque / Rastorale / Petite Réunion / Innocence / Progrès / Courant limpide / La gracieuse / La chasse / Tendre fluer / La bergeronnette / Adieu / Consolation / La styrienne / Ballade / Douce plainte / Babillarde / Inquiétude / Ave Maria / Tarentelle / Harmonie des anges / Barcarolle / Retour / L'hirondelle / La chevaleresque (Type A songs)

Classical Pieces **RC-1005CL**
Für Elise / Träumerei Op.15 No.7 / Turkish March / Gymnopédie No.1 / Sonata Op.27 No.2 Moonligt 1sat Mov. / Sonata Op.13 Pathétique 2nd Mov. / Invention No.1 / Invention No.8 / Invention No.15 / Norwegian Dance Op. 35 No.2 / Militär Marsch Op.51 No.1 (Type A songs)

Classical Recital **RC-1006CL**
Fantaisie Impromptu / Je Te Veux / Walzer Op. 64 No.1 / Nocturne Op. 9 No.2 / Liebesträume No.3 / Golliwog's Cake Walk / Étude Op.10 No. 12 Revolutionary (Type A songs)

Screen Themes **RC-1007SC**
Love Story / When You Wish Upon a Star / A Time for Us / A Summer Place / Speak Softly Love / Tara's Theme / Love is a Many-Splendored Thing / East of Eden / The Shadow of Your Smile (Type A songs)
Lara's Theme (Type C song)

Pops **RC-1008PO**
Moon River / Strangers in the Night / Love Letters / Over the Rainbow / Your Song / El Bimbo / I Write the Songs / Blue Moon / Begin the Beguine (Type A songs)
The Windmills of Your Mind (Type C song)

Jazz **RC-1009JZ**
It's Only a Paper Moon / Someday My Prince Will Come / Take the "A" Train / As Time Goes By / Autumn in New York / The Days of Wine & Roses / Round About Midnight (Type A songs)
What's New? (Type C song)
On Green Dolphin Street (Type B song)

Contemporary Pops **RC-1010CP**
Take My Breath Away / The Never Ending Story / Goonies'"R'Good Time / I'll Never Get Enough of You / Greatest Love of All / Up Where We Belong / Arthur's Theme / Almost Paradise / If We Hold On Together / La Isla Bonita (Type A songs)

*Refer to page 37 "About card song types" for information on types of the songs in the ROM cards.

Certain of the above compact discs and ROM cards may not be available in some areas.